# Northwest Ordinance July 13, 1787

An Ordinance for the government of the Territory of the United States northwest of the River Ohio.

## U.S. Environmental Protection Agency

Section 1. Be it ordained by the grown States in Congress assembled, That the said territory, for the purposes of temporary government, be one district, subject, however, to be divided into two districts, as future circumstances may, in the opinion of Congress, make it expedient.

Sec 2. Be it ordained by the authority aforesaid, That the estates, both of resident and nonresident proprietors in the said territory, dring intestate, A Plan for Achieving the Agency's Goals and shall descent to, and be distributed among their children, and the Objectives in Region 5 descendants of a deceased child, in equal parts; the descendants of a deceased child or grandchild to take the share of their deceased parent in equal parts among them: And where there shall be no children or descendants, then in equal parts to the next of kin in equal degree; and among collaterals, the children of a deceased brother or sister of the intestate shall have, in equal parts among them, their deceased parents share; and there shall in no case be a distinction between kindred of the whole and half blood; saving, in all cases, to the widow of the intestate her third part of the real estate for life, and one third part of the personal estate; and this law relative to descents and dower, shall remain in full force until altered by the legislature of the

## **Table of Contents**

## **Executive Summary**

- I. An Overview of Region 5
- II. Regional Strategies for Achieving the Agency's Goals and Objectives
- III. Regional Approaches to Implementing the Agency's Cross-Goal Strategies
- IV. Regional Accountability and Performance Measurement Tools
- V. Partnerships with the Region's States and Tribes

## **Executive Summary**

Region 5 has and will continue to work with its State and Tribal partners, in the context of Performance Partnership Agreements, Tribal Environmental Agreements, and other joint strategic dialogs, to review and refine the focus of our collective and individual efforts on those problems of highest priority in the Region. For several years, Region 5 has concentrated much of its efforts in addressing problems in specific geographic areas and in focusing on specific environmental and human health challenges in the Region.

Beginning in FY 2004, the Region has initiated a **Great Cities Program**, which is designed to enhance our work in geographic areas by addressing complex environmental problems in urban areas which, whether single or multi-media in nature, benefit from an innovative approach under the management of dedicated staff. The Region will focus on action, not analysis; use individual projects to get to results; seek comprehensive, community supported solutions; bring the full range of EPA regulatory and voluntary tools and expertise to bear on the problems; leverage resources from across the agency as well a with other federal, state, local, and private partners; and build on existing capacity in groups and institutions wherever possible.

For the period of FY 2004 though FY 2006, Region 5 will also focus its efforts on addressing a specific list of inter-related environmental and human health challenges in the Region: Air Toxics, Elevated Blood Lead Levels in Children, Gulf of Mexico Hypoxic Zone, Methylmercury in Fish, Persistent Toxics in the Great Lakes Basin, and Water Quality and Swimming.

The Region is implementing improved processes for up front planning and priority setting with the States and Tribes. Each Performance Partnership Agreement (PPA) negotiation period will start with a period to identify mutual and singular priorities. The Region and each State will work together to identify the top priorities as well as develop a skeletal work plan that identifies how both agencies will pool their resources to achieve the goal. The primary context for overall planning between the Region and the Tribes is the Tribal Environmental Agreements (TEAs), which focus on specific environmental problems, programmatic development, and capacity building.

i 01/15/2004

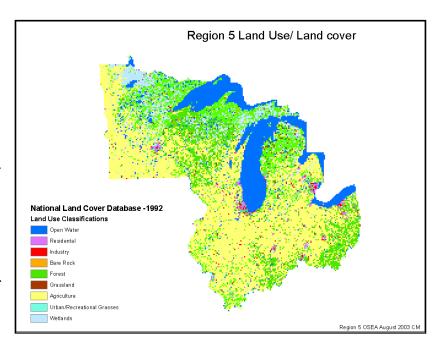
## I. An Overview of Region 5

## **History and Background**

The Northwest Ordinance of 1787, considered to be one of the most significant achievements of the Congress of the Confederation of the fledgling United States, allowed for the creation of as many as five states in the northwest portion of the Ohio Valley on lines originally laid out in 1784 by Thomas Jefferson in his Report of Government for Western Lands. Known as the Northwest Territory or the Old Northwest, this first possession of the United States was located south and west of the Great Lakes, northwest of the Ohio River, and east of the Mississippi River. It included the present states of Ohio, Indiana, Illinois, Michigan, Wisconsin, and part of Minnesota, the states that currently comprise EPA's Region 5. The policies that were devised for the sale of land and for the government in this region established precedents for the settlement of the public domain across the whole of the United States.

European settlement had a profound effect on the physical character of Region 5. Originally, Ohio, Indiana, and the southern third of Illinois were primarily covered by dense hardwood forests, while the remainder of Illinois, much of southern Wisconsin, and southern and western Minnesota were dominated

by tall grass prairie. Northeastern Minnesota, northern Wisconsin, and much of Michigan were covered by mature mixed deciduous and evergreen forests. Throughout the nineteenth century, extensive logging for lumber and land clearing for agriculture eliminated most of the mature forests and prairies. Today, the landscape of Region 5 is dominated by lands in agricultural production and by second growth evergreen and deciduous forests. The main crops for Region 5 are corn, sorghum and soybeans which comprise 78.2% of the Region's cropland. Other crops that are grown in Region 5 include wheat, fruit, vegetables, and hay. Timber is grown and harvested for pulp, lumber, and composite products.



**Figure 1**: Data Source: 1992 National Land Cover Database, USGS

I - 1 01-15-2004

The settlement of the states in Region 5 was facilitated by the major waterways that surround, and in large measure define, the Region, the Ohio and Mississippi Rivers and the Great Lakes. According to

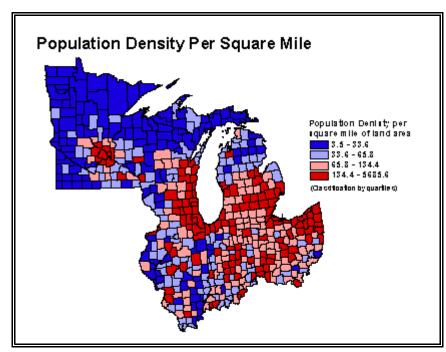


Figure 2: Data Source: 2000 Census, US Census Bureau

combined gross state products of all fifty states in the nation.

the 2000 U.S. Census, 17.8% of the population of the United States resides in Region 5, and the Region's highest population density centers are found around the Lower Great Lakes with several of the Region's major metropolitan areas (Milwaukee, Chicago, Northwest Indiana, Detroit and Cleveland) located along the lower Great Lakes shoreline. Although Region 5's largest land area is devoted to agriculture, the region's economy also has a strong industrial base, most of it located in the areas of highest population density. As a matter of fact, most of the Region 5 states' gross product comes from manufacturing, and the gross state products of the Region 5 states account for 17% of the

Region 5 is water rich compared to much of the country and thus water is a big factor in the activities of this region. There are approximately 1.5 million more inland lake acres in Region 5 than the national average for the EPA regions. The 5,801,970 acres of inland lakes, combined with the four Great Lakes in Region 5 and the many river/stream miles, makes surface water a dominant issue in this region. In addition to providing aquatic habitat and meeting the needs of industry, surface water is a source of drinking water for community water systems in Region 5 serving 26 million people. Another 14 million people receive water from community water systems that utilize ground water.

## **Environmental and Human Health Challenges and Priorities in Region 5**

Region 5 has and will continue to work with its State and Tribal partners, in the context of Performance Partnership Agreements, Tribal Environmental Agreements, and other joint strategic dialogs, to review and refine the focus of our collective and individual efforts on our highest priority problems. For several years, Region 5 has concentrated much of its efforts in addressing problems in specific geographic areas and in focusing on specific environmental and human health challenges in the Region. The Region is in the process of completing work in a number of those geographic areas and will begin

I - 2 01-15-2004

work in others. Similarly, our focus on environmental and human health challenges will continue to evolve as we make progress and as new challenges emerge.

Beginning in FY 2004, the Region has initiated a **Great Cities Program**, designed to enhance our work in major cities by addressing complex environmental problems which benefit from an innovative approach under the management of dedicated staff. The Region will focus on action, not analysis; use individual projects to get to results; seek comprehensive, community supported solutions; use the full range of EPA regulatory and voluntary tools and expertise on the problems; leverage resources from across the agency as well as from other federal, state, local, and private partners; and build on existing capacity in groups and institutions wherever possible.

For the period of FY 2004 through FY 2006, Region 5 will also focus its efforts on addressing a specific list of inter-related environmental and human health challenges in the Region. The following is a brief description of those challenges and our approaches to dealing with them. More information on our goals and strategies in addressing these challenges is included in Chapter II of this Plan.

#### Air Toxics

The EPA's National-Scale Air Toxics Assessment (NATA) is a modeling analysis of the inhalation

exposure to toxic air pollutants, and presents estimated nationwide results of risks from human exposure to 32 urban air toxics, plus a qualitative assessment of risks from exposure to diesel particulate matter. According to the 1996 NATA, over 22 million people in Region 5 live in areas with an estimated excess cancer risk greater than 5 in 100,000. Many people are exposed to even greater localized risks. Using the Risk Screening Environmental Indicators (RSEI) model and 1999 TRI data, four of the top six nationally ranked states are in Region 5.

Diesel exhaust, identified as a likely human carcinogen, is a widespread concern in Region 5. As the Agency continues to pursue regulatory strategies to reduce diesel emissions, Region 5 will prioritize near-term voluntary strategies targeting diesel fleets and locomotives. We will promote diesel retrofit grant opportunities, diesel retrofit/anti-idling Supplemental Environmental Proojects (SEPs), the creation of one or more third party groups capable of accepting/ managing SEP funding to facilitate transactions, and continue to work with local communities and/or States with a strong interest in diesel projects.

In addressing the broader air toxics problem, our initial effort will be aimed at better characterizing air toxics in Region 5 at the local level to better target our mitigation strategies. For example, we will utilize available monitoring data and modeling expertise to assess which air toxics drive the risk values seen in Region 5, and to identify potential hot spots. This information will be evaluated along with proximal source data and Clean Air Act regulatory schedules to identify possible air toxics problems for which there is no foreseeable relief. This assessment will help prioritize Region 5's efforts to work with states, local agencies, and communities to implement voluntary measures to address elevated risk levels.

I - 3

Finally, although NATA does not address air toxics and risk associated with indoor environments, it is important to note some Region 5 statistics. Nearly 9 million adults in Region 5, or 24% of the population, are smokers, and over 45 million people in Region 5 live in counties with elevated radon levels. Region 5, in partnership with the appropriate lead State agencies, will continue to support the Agency's radon program, and will seek opportunities within our community-based efforts to promote indoor air quality efforts.

#### **Elevated Blood Lead Levels in Children**

Region 5 cities have exceptionally high rates of children with elevated blood-lead levels (EBLs). Data indicate that between 14-22% of children tested in major Region 5 cities have EBLs, compared with the national average of 2.2%. Elevated blood lead levels in children has been shown to impair intellectual development.

A number of factors have contributed to children's EBLs in Region 5. Lead-based paint was used in residential and other property in Region 5. This paint was attractive in the cold climate because it resists freeze-thaw and dampness stresses. A large number of housing units in Region 5 cities were built when lead-based paint was in use. This paint is still a source of lead contamination.

We will utilize various approaches with federal, state, and local partners to minimize children's exposure to sources of lead in the environment. Measures of success in this effort include:

- By 2008 reduce the number of children with EBL from 400,000 (in 1999/2000) to 150,000.
- By 2010, all children will have blood lead levels below the CDC and EPA action level of 10μg/dl in accordance with the federal inter-agency lead strategy and GPRA goals.

## **Gulf of Mexico Hypoxic Zone**

Nutrient loadings from throughout the Mississippi River Basin, which includes a large portion of the area of Region 5, are believed to be the principle cause of the expansion and increasing persistence of a hypoxic zone in the Gulf of Mexico.

Region 5 will work with Region 7 to organize and assist the operation of a state led sub-basin work group, and will work through other federal, state, and inter-state organizations to promote reductions in nutrient loadings to the Mississippi River basin. Our goal, by 2010, is to decrease loadings of nitrogen from targeted agricultural watersheds in the Upper Mississippi River Basin by 30%.

I - 4 01-15-2004

#### Methylmercury in Fish

Mercury is introduced into the environment through a wide array of sources, including atmospheric deposition and releases from soils, sediments, industrial processes, and non-point sources. Mercury is volatile and easily transferable once it is released to the environment, and ultimately much of it makes its way into Region 5 lakes and rivers, including the Great Lakes, where it can transform to methylmercury and enter the food chain. Once in the Great Lakes and other basins, mercury has a very long retention time.

Methylmercury in fish tissue poses a human health risk, as mercury affects the nervous system. Although we have good information about the toxicology of mercury, we do not fully understand the dose/response relationship of mercury exposure. We do, however, know that the populations most at risk are fetuses, infants, and young children because of the sensitivity of their developing nervous systems. Native Americans and other subsistence fishers are also at higher levels of risk because increased levels of fish consumption result in a greater potential exposure. All states in Region 5 have issued fish consumption advisories for mercury and the states have identified over 2200 waterbodies in Region 5 impaired due to mercury contamination, making it by far the single most common cause of water quality impairment.

Our goal is to have methlymercury levels in fish low enough to remove all related fish advisories in Region 5. Attainment of this goal will take a long time, so as an interim target, Region 5 will strive to achieve a proportionate share of the national goal for reductions in mercury emissions by 2010, reductions in mercury use in hospitals by 2008, and other source reductions by 2008.

#### Persistent Toxics in the Great Lakes Basin

Due to our glaciated landscape, Region 5 has a very large proportion of the nation's fresh water, including the Great Lakes and numerous inland lakes and streams. Lake and stream sediments are a sink for bioaccumulative toxics. Bioaccumulative toxics in sediments are the largest source of toxic chemicals to the Great Lakes food chain, and pose a threat to human health, aquatic life, and the environment. Humans, aquatic organisms, and other wildlife are at risk through direct exposure to pollutants or through consumption of contaminated fish and wildlife. Exposure is linked to cancer, birth defects, neurological defects, immune dysfunction, and liver and kidney ailments. The extent of some risks is unclear, but will leave a legacy of contamination for future generations.

Contaminated sediments may also cause economic impacts, at both the local and regional level, on the transportation, fishing, tourism, and redevelopment industries.

As articulated in the Agency's Great Lakes Strategy, we have a number of goals in addressing this problem:

By 2008, a cumulative total of at least 3.3 million cubic yards of contaminated sediment in the Great Lakes will be remediated. (2002 Baseline: 2.1 million cubic yards of contaminated sediments from the Great Lakes have been remediated from 1997-2001).

I - 5

- In June or July of 2008, we will be able to report on the quantity of sediment remediated through calendar year 2007. At 200,000 cubi yards annually, that total will be 1.2 million cubic yards from 2002 through 2007.
- Beginning in 2004, complete three sediment remedial actions per year until all known sites in the Basin are addressed.
- Accelerate the pace of sediment remediation, leading to the clean-up of all sites in the Basin by 2025.

#### Water Quality and Swimming

The Great Lakes are an invaluable recreational resource; however, wet weather pollution from combined sewer overflows (CSOs), separate sanitary sewer overflows (SSOs) and storm water (SW) discharges too often contaminate beaches with pathogens, making swimming unsafe. Of the 278 high priority Great Lakes beaches identified by states, many are within CSO communities or under the influence of SSO or SW discharges that have the potential to adversely impact swimming.

Our goal is to control wet weather pollution (from CSO, SSO, and SW) so that it causes no closures of high priority Great Lakes beaches. Recognizing that this is a long term goal, in the interim we will target CSO, SSO and SW controls so that by 2007, 90% of monitored, high priority Great Lakes beaches will meet bacteria standards more than 95% of the swimming season.

I - 6 01-15-2004

## II. Regional Strategies for Achieving National Goals and Objectives

In this Chapter of the Plan, we describe on the following pages how the Region's work supports the National Goals and Objectives contained in EPA's 2003 *Strategic Plan*. The Plan articulates the strategies, core program tools, and innovative approaches that the Region is using to make progress toward achieving each relevant sub-objective in the Agency's Strategic Plan.

For each objective or sub-objective, the Region 5 Plan attempts to address the following questions:

- A. What is the current state of human health or environmental protection for this Subobjective in your Region and are there any relevant trends over time (i.e., what are indicators or data specific to this Sub-objective that characterize current status and trends as context for your strategy)?
- A. What are the major problems that need to be addressed in order to make progress toward this Sub-objective in your Region?

In addition, the Plan identifies the tools or program components (e.g., permits, enforcement, State capacity building, compliance assistance, direct program delivery, industry partnerships, etc.) that will be focused on those problems, and highlights any novel or innovative approaches the Region or its States plan to pursue to implement a core program.

Where the Regional Strategy includes activities addressing Regional interests not covered by the National strategy, it describes these activities and identifies the primary measures that the Region will use to track progress in implementing its strategy.

## Goal 1: Clean Air and Global Climate Change

Protect and improve the air so it is healthy to breathe and risks to human health and the environment are reduced. Reduce greenhouse gas intensity by enhancing partnerships with businesses and other sectors.

Region 5 Air and Radiation Division (ARD) supports the national goals and strategies laid out in the Agency's Strategic Plan. The information provided in the following tables describes the outcomes and desired results that we intend to achieve in the Region within each National Sub-Objective. It discusses the current state of the environment, our long term environmental goals, and our strategies to attain those goals. An outgrowth of these strategies will be specific activities and annual goals and deliverables included in our annual memorandum of understanding with our Headquarters Office of Air and Radiation (OAR).

We have identified several Regionally unique and overarching approaches which are driving our investments and decision-making. These involve both how we are addressing specific environmental problems of concern, but also problem-solving approaches or values which underlie our actions.

**Partnerships:** To effectively solve environmental problems, we must harness the cumulative resources of the Federal, State, Local and Tribal organizations. By continuing to strengthen our relationships, we can better identify common and individual priorities and how our roles can complement each other. ARD has invested in a strong annual planning process with States, Locals, Tribes, and Regional Planning Organizations which emphasizes communication at all levels, early identification of problems and a partnership approach to accomplishing our objectives by identifying our individual and joint strengths and roles. In addition, we have worked with the Tribes to develop an overall Region 5 Tribal Plan. The plan includes information about each Tribe, its environmental issues and the status of its environmental work or program. It is the starting point for ARD to prioritize environmental issues, and compliments the criteria and selection process used to evaluate Tribal funding requests in light of limited resources.

Although States/Locals/Tribal organizations are our primary partners in environmental protection, we also seek out opportunities to work with a variety of other entities to take advantage of specific knowledge or expertise. Through working with these entities and sharing knowledge, it is often feasible to identify and implement mutually agreeable near term strategies. Through these efforts, working cooperatively with others, we can better achieve our clean air goals.

Innovative Problem-Solving: Achieving further air quality gains requires each of us to approach environmental problems with an eye toward understanding the underlying causes and considering all options for solution, both traditional and non-traditional. Voluntary efforts can often bring about environmental improvement at a local level faster and more targeted to the specific problem of concern than existing regulatory programs. Innovative solutions that provide for win-win acceptance can often break the stalemates that occur due to our varied stakeholders and the complexity of our programs. Further, as public servants, we all accept the challenge of maximizing the public benefit we can provide by seeking continuous improvement of our programs and processes. A good example of how were incorporating these principles into our programs is in compliance assurance where we have pursued global enforcement settlements and expedited resolution of violations. This has resulted in more efficient use of resources in securing greater environmental benefits.

**Fine particulate:** Fine particulate emissions are the most serious environmental health threat that we face today. In addition to supporting the regulatory framework of monitoring, designations and state implementation plans, we are working with stakeholders on numerous emission reduction opportunities that

II - 1 - 1 01/15/2004

can be pursued now. Because of the significant benefits that can be achieved in the next few years prior to implementation of the Agency's fine particulate standards, voluntary efforts related to diesel truck, bus and locomotive engines are a priority. Working with State/local governments, communities and businesses, project areas include diesel truck, commuter and school bus retrofits, locomotive engine retrofits, idling practice changes, electrification projects and low sulfur diesel commitments. In addition, ARD's enforcement group is prioritizing these types of reductions for possible Supplemental Environmental Projects (SEP).

**Air Toxics:** In order to control air toxics risks, States, communities and EPA need to better understand and assess the risks while implementing near term voluntary efforts. We will be deploying additional toxics monitoring in the coming years. We will also be using the national level data and ongoing pilots to help us to focus efforts towards communities with potentially more significant issues. We have already seen that concentrations are higher in large urban areas and intend to further partnerships with our communities and the States to deploy monitoring equipment, assess and characterize the risks, and implement mitigation measures such as near term voluntary reductions like school bus retrofits, idling technologies and early low sulfur diesel implementation.

Schools: Improving air quality for children and other sensitive populations is a priority within the Region and ARD is actively supporting and engaging this priority. We intend to coordinate with the Waste Pesticides and Toxics Division, the Children's Health program manager, and other Divisions within the Region to put together a comprehensive information package with tools schools can use to address environmental concerns across media. Using this information, we can approach schools with all of the options available to them to provide a healthier environment for their students. Through this strategy, we can use our resources to most effectively continue our active role in engaging schools in the Tools for Schools program and environmental management system (EMS) strategies. We are also active in disseminating information on asthma and have folded that information into the training that we do for school administrators, principals and teachers. Encouraging schools to participate in the Energy Star program will be another component of our schools approach. We also intend to partner with school districts to fully participate in the "Clean School Bus USA" initiative to reduce children's exposure to diesel exhaust. We believe there are significant opportunities to improve air quality in schools and are partnering to bring these programs to our school districts. We continue to support the efforts of the Sunwise program when we are in schools advocating children's environmental health programs.

**Homeland Security:** Homeland Security is a high priority for EPA's Office of Air and Radiation (OAR) and Region 5's Air and Radiation Division (ARD). We will continue to support the Agency's role in providing national monitoring networks for radiation and biological contaminants. Although the Emergency Response program is the lead in responding to chemical, biological, and radiological events, ARD will provide support in the prevention and recovery activities related to Homeland Security, as defined by the Office of Radiation and Indoor Air. We are participating on relevant workgroups necessary to establish an effective internal Continuity of Operations Plan, and to coordinate with State/local agencies in promoting regional preparedness.

**Objective 1.1: Healthier Outdoor Air.** Through 2010, working with partners, protect human health and the environment by attaining and maintaining health-based air-quality standards and reducing the risk from toxic air pollutants.

**Sub-objective 1.1.1:** More People Breathing Cleaner Air. By 2010, working with partners, improve air quality to healthy levels for 39 percent of the people who live in areas where the air does not meet national standards for fine particles in 2001 and for 60 percent who live in areas

II - 1 - 2 01/15/2004

not meeting national standards for 8-hour ozone in 2001.<sup>1,2</sup> While some areas may not reach attainment of these standards because of air pollutant concentrations that sometimes exceed the allowable levels, air quality will improve for an additional 27 percent of the people who live in areas not meeting standards for 8-hour ozone in 2001. Maintain attainment status for the 123.7 million people who had healthy air for the criteria pollutants in 2001.

A. What is the current state of human health or environmental protection for this objective in the region and are there any relevant trends over time (i.e., what indicators or data specific to this objective characterize the current status and trends as context for the region's strategy)?

Air quality in Region 5 has significantly improved since the enactment of the 1990 Clean Air Act. For the 1990 Clean Air Act National Ambient Air Quality Standards (NAAQS), in 2001 all monitors in Region 5 monitored attainment. However, 1-hour ozone monitoring for the Chicago and Northwest Indiana area, the Southeast Wisconsin area and the Cleveland area has since monitored nonattainment. Even though these areas are monitoring nonattainment, significant progress has been made in each. Fox example, in the multi-state Lake Michigan area in 1990, the area was originally designated with a design value of 190 ppb and a severe nonattainment classification. If the area were designated today, the design value would be 132 ppb and a moderate classification due to significant reductions in emissions brought about by implementation of mandatory and voluntary control measures. That means that when considering the 1990 NAAQS, nearly 36 million people are now living in "clean" areas which were once nonattainment for one of these pollutants.

In 1997, as required by Congress, EPA reviewed the ozone and particulate matter standards and found that health studies supported the need for more stringent standards to adequately protect human health and EPA promulgated the 8-hour ozone and PM fine NAAQS. For the 8-hour ozone and PM 2.5 NAAQS, there are many areas in the Region that are monitoring nonattainment. The most recent quality assured monitoring data shows monitors in 90 counties monitoring nonattainment for 8-hour ozone and 24 counties monitoring nonattainment for PM2.5. Once areas are designated nonattainment for 8-hour ozone and PM2.5, there will be a more complete picture of population affected.

B. What are the major problems in the region that need to be addressed in order to make progress toward the strategic objective?

Region 5's Air and Radiation Division (ARD) has been working closely with the National Office of Air and Radiation (OAR) to achieve outdoor air objectives. Our goals and activities line up with the Strategic Plan and what OAR has established as its priorities, including reduction in

II - 1 - 3 01/15/2004

<sup>&</sup>lt;sup>1</sup> U.S. Environmental Protection Agency. September 2002. *Latest Findings on National Air Quality: 2001 Status and Trends*. EPA 454/K-02-001. Washington, DC: GPO. Available online at <a href="http://www.epa.gov/air/aqtrnd01/">http://www.epa.gov/air/aqtrnd01/</a>: EPA Office of Air and Radiation Web Site. Date of Access: September 8, 2003.

<sup>&</sup>lt;sup>2</sup> Areas not meeting the standards are EPA projections based on 1999-2001 air quality monitoring data, which is maintained in the *Air Quality Subsystem* (AQS). AQS contains ambient air pollution data collected by EPA and state, local, and tribal air pollution control agencies from thousands of monitoring stations. Information can be obtained from: U.S. Environmental Protection Agency, Technology Transfer Network, Air Quality System Web Site, <a href="http://www.epa.gov/ttn/airs/airsaqs/sysoverview.htm">http://www.epa.gov/ttn/airs/airsaqs/sysoverview.htm</a>. Date of Access: September 8, 2003.

exposure to particulates, ozone and toxics, reinventing our base programs and pursuing innovative and voluntary approaches, and working on global warming issues. To help describe our strategies and their relationship to the national strategies, first, it is important to understand some of the unique drivers in the Region that affect air quality and the current state of the air in Region 5.

When considering the air quality in Region 5 and more importantly how to ensure that it is protected and improved, it is essential to understand the significant population and industry source sectors that call the Region home. Region 5 has 50 million people or about 18% of the US population, the vast majority of which live in the 52 metropolitan areas in the region. 22% of the cities in the country with population over 25 thousand are in the Region. A full 50% of the nations Iron and steel capacity is within the Region and 24% of the nations coal fired utility electrical production (13% of total utility electrical generation) comes from Region 5. Annual vehicle miles traveled (in millions) in R5 is 487,285 million miles or 18% of the national annual VMT. 25% of the Nations manufactured goods come from Region5. Roughly a quarter of the national acid rain precursors are generated in the Region. About 90% of the nation's fresh surface water (20% of the world's) is stored in the Great Lakes. Amazingly, 23% of the Nation's agriculture is also in the Region.

Outcomes/Desired Results	Regional Strategies
Improve Fine Particulate Air Quality and Improve 8-Hour Ozone Air Quality	Support development of timely and effective SIPs and TIPs and maintain overall State and Tribal program support, including assuring:
Measure: By 2010, working with partners, improve air quality to healthy levels for 39 percent of the people who live in areas where the air does not meet national standards for fine particles in 2001 and for 60 percent who live in areas not meeting national standards for 8-hour ozone in 2001. <sup>1,2</sup>	<ol> <li>an effective State, Tribal and local grant program</li> <li>an effective monitoring network and emission inventory supportive of designations and development of control measures</li> <li>timely guidance and issue resolution</li> <li>timely processing of State SIP and Tribal TIP submittals, including source-specific ones</li> <li>Cooperative permit strategies are developed for PM2.5 and 8-hr Ozone to include:         <ul> <li>An evaluation of states' current NSR SIP to determine if revisions are necessary and schedules to revise current SIP developed as appropriate;</li> <li>Technical assistance to states to implement national permit guidance (i.e., transition policy) once developed;</li> </ul> </li> <li>Reduce emissions of sulfur dioxide and oxides of nitrogen through trading programs.</li> <li>Reduce emissions of Oxides of Nitrogen, Volatile Organic Compounds, Particulate Matter, and Carbon Monoxide from mobile sources and fuels.</li> <li>Ensure real time ambient air concentration information is available for criteria pollutants of concern.</li> <li>Pursue diesel retrofits and idling projects, Best Workplaces for Communities initiative and other voluntary measures to achieve early reductions, specifically targeting urban communities with</li> </ol>

II - 1 - 4 01/15/2004

Outcomes/Desired Results	Regional Strategies
	most severe PM and Ozone issues.  10) An effective enforcement program targeted at securing largest emission reductions of PM fine and ozone precursors and emissions.  11) Effective use of SEPs to promote implementation of voluntary measures especially preferred SEPS including highly effective projects such as diesel retrofits. Develop efficient means for companies to contribute to SEP projects.  Evaluation: Number of States in Region where designations occurred on schedule. Number of States which submit control measures and plans on schedule. Status/progress toward NOx SIPs' reduction goals. Schedule for NSR SIP revisions are established; State permit issuance continues; permit guidance developed to ensure smooth transition for areas being redesignated. Were mechanisms developed for companies to make contributions to SEPs. Have companies contributed to these. Are projects identified as preferred SEPs being implemented especially diesel retrofit SEPs.  Measures:  • Ambient concentrations of ozone, measured against the 8-hour standard and PM2.5.  • Populations living in (and number of) areas measuring healthy air quality for 1-hour ozone and PM-10.  • Number of ozone and PM 2.5 monitoring sites in Indian country  • Number of companies participating in the commuter choice program and correlating NOx, VOC, PM, CO and toxic emission reduction.  • Tons of criteria pollutant and precursor emissions reduced through injunctive relief.  • Tons of criteria pollutant and precursor emissions reduced through Supplemental Environmental Projects (SEPS).  • Emissions reductions from voluntary projects such as diesel retrofits.
Real time information is available for criteria pollutants of concern to support public health and behavior changes.	Ensure Region 5 criteria pollutant of concern is available to support public health and behavior changes by providing real time information systems and predictions.  Measure: AQI is fully supported with Real Time data.
Reduce regional haze.	Work with Regional Planning Organizations and States and Tribes to develop long-term strategy for region.

II - 1 - 5 01/15/2004

Outcomes/Desired Results	Regional Strategies
Preserve and maintain healthy air quality in Carbon Monoxide (CO), Nitrogen Dioxide (NO), Sulfur Dioxide (S02), and Lead (Pb) areas.	Support necessary monitoring network, effective permitting and enforcement in attainment and maintenance areas. Training conducted for states to address issues identified from permit program evaluation and/or permit review.
Measure: 0 % increase in population subjected to unhealthy CO, NO, SO2, and Pb air quality.	<b>Evaluation:</b> Where CO, NO, SO2, and Pb monitors or subsequent modeling indicate an air quality violation has occurred, violation is quickly identified and the respective State is adopting/implementing contingency measures according to SIP schedule.

**Sub-objective 1.1.2: Reduced Risk from Toxic Air Pollutants**. By 2010, working with partners, reduce air toxics emissions and implement area-specific approaches to reduce the risk to public health and the environment from toxic air pollutants.

A. What is the current state of human health or environmental protection for this objective in the region and are there any relevant trends over time (i.e., what indicators or data specific to this objective characterize the current status and trends as context for the region's strategy)?

The National Air Toxics Assessment (NATA) indicates that air toxics are a concern nationwide and there are a significant number of urban areas in Region 5 which are at a higher relative risk. According to NATA, there are over 22 million people in Region 5 that live in counties with an estimated excess cancer risk greater than 5 in 100,000, and risk in localized areas in the counties can be significantly greater. Four of our 6 States rank in the top 6 for high relative risk by the Risk Screening Environmental Indicators (RSEI) model. These risks are due to a number of factors. The National Toxics Inventory indicates that Region 5 has the highest air toxics emissions in the nation at greater than 900,000 tons and the highest utility mercury emissions of all the regions at greater than 12 tons per year.

B. What are the major problems in the region that need to be addressed in order to make progress toward the strategic objective?

There are more than 6,000 sources that report TRI emissions in Region 5 with greater than 200,000 tons per year of air toxics emissions. Region 5 has more than 10,000 sources affected by MACT standards. Urban air toxics emissions are estimated at greater than 300,000 tons per year in 1996 and diesel particulate emissions at greater than 90,000 tons per year. Mobile sources are also a concern in Region 5. VMT is estimated at almost 500,000 million miles per year and is expected to increase over time. Region 5 includes 90% of the nations fresh surface water, 20% of the world's surface freshwater, 14,719,000 acres of national forest, 1,267,000 acres of wilderness land and 1,132,000 acres of national park, lakeshore and scenic rivers. These sensitive ecosystems are affected by deposition of pollutants which has contributed to fish advisories in all 6 Region 5 States. In addition, international air toxics issues also affect Region 5 because of the borders that we share with Canada. In summary, region 5 has a large number of industrial sources and emissions, high mobile source emissions, significant land areas and ecosystems, and a large population being exposed to these emissions, including sensitive populations such as children and the elderly.

II - 1 - 6 01/15/2004

There are several elements necessary to successfully reduce the population's risk from air toxics: enforcement of MACT and other regulatory approaches, effective risk assessments, risk reduction through non-regulatory approaches such as voluntary reduction, outreach and education. Working towards integration of indoor, outdoor and mobile source approaches will be a significant improvement to risk assessment and mitigation efforts. Much of the information and tools available to characterize air toxics risks, determine corrective measures, and assess the programs success, need to be developed and refined. Pilot projects will assist by contributing to our knowledge base as well as reducing population risk. All of these activities will also contribute to building regional and state capacity and partnerships.

#### **Outcomes/Desired Results** Regional Strategies By 2010, EPA and its partners Promote comprehensive and effective air toxics programs by: 1) building expertise in the Region, States and Tribes will reduce air toxics emissions and implement area-specific 2) developing needed assessment and characterization tools for approaches to reduce the risk to purposes such as targeting mitigation, public health and the 3) conducting pilots, and other targeted risk assessments on a caseenvironment from toxic air by-case basis to address both immediate health/risk questions and pollutants. support tool development, 4) supporting quality air toxics data systems (TRI, RAPIDS, NTI, and NATA), Measure: By 2010, the States, locals, tribes and Region 5 will 5) establishing and maintaining toxics ambient air monitoring have the information and tools to networks. 6)implementing voluntary programs, particularly focusing in the assess toxics trends for all 6 of near term, on diesel retrofit and idling reduction opportunities in our states, 1 local air pollution control agency and at least 4 of urban areas as well as reduction opportunities in other areas, our Tribal lands. Levels and 7)delegating and/or otherwise ensuring implementation and enforcement of MACT, Part 61, section 111(d) and 129 standards, trends are characterized not only across States and Tribes but also including providing implementation assistance to States and Tribes, as necessary, within communities. 8) using the MACT prioritization tool to select sectors for priority enforcement and compliance assurance, 9)prioritizing and directing investments in new monitoring through analysis and consideration of pilot city data and available relative risk indicators. 10) ensuring high quality air toxics data by developing a regional lab protocol to allow for comparability. 11)utilizing the ambient air mobile monitoring laboratory to target future investments (through short term air toxics screening). **Evaluation:** The number of local/community air toxics assessments initiated and completed. The number of voluntary emission reduction projects initiated. Measures: • Tons of air toxics reduced from all stationary sources. • Tons of air toxics reduced from mobile sources. • Tons of air toxics reduced by implementation of MACT and

area source standards.

II - 1 - 7 01/15/2004

Outcomes/Desired Results	Regional Strategies
	<ul> <li>Tons of Air Toxics reduced from enforcement efforts.</li> <li>Tons of Air Toxics reduced from voluntary and SEP programs.</li> <li>Toxics weighted emissions reductions.</li> <li>National Air Toxics Assessment (NATA)</li> <li>National Air Toxics Trends Sites (NATTS)</li> <li>National Emissions Inventory (NEI)</li> </ul>
"Virtually eliminate" mercury from the Great Lakes ecosystem. 50% reduction in mercury emissions and use by 2006.	Achieve mercury reductions through implementation of MACT standards, Clear Skies and through voluntary reduction efforts focused on specific sectors including the chlor-alkali industry, the scrap steel sector, and the dental sector.  Measures:  • Tons of mercury reduced from EGUs.

**Objective 1.2: Healthier Indoor Air.** By 2008, 22.6 million more Americans than in 1994 will be experiencing healthier indoor air in homes, schools, and office buildings.<sup>3</sup>

A. What is the current state of human health or environmental protection for this objective in the region and are there any relevant trends over time (i.e., what indicators or data specific to this objective characterize the current status and trends as context for the region's strategy)?

Region 5 has the largest population of people living in counties with elevated radon levels, as compared to the other regions. Over 45 million people in Region 5 live in counties identified as Radon Zone Level 1 or 2, which is about 90% of its total population (USEPA SIRG estimate). Based on a 2001 CDC report, it is estimated that the prevalence of adult asthma in the U.S. is over 15 million, with almost 2.9 million residing in Region 5. Cook County, Illinois, has one of the highest mortality rates from asthma in the country, with most deaths occurring in the city of Chicago. Based on 1994 national estimates, approximately 27% of homes with children aged six and younger currently allow smoking, affecting approximately 9-12 million children each year. With almost 20% of the nation's public schools in Region 5 (U.S. Dept of Education, 2001 statistic), a 1996 GAO survey demonstrated that over half of the Region 5 schools responding had reported at least one environmental condition as being unsatisfactory.

For the Home Environment, Region 5 ARD's Indoor Air Program (IAP) and its partners have been making gains on improving the indoor living spaces for its residents. Region 5 has the largest, most active radon program in the country, with over \$2.6 million given out in 2003 for its state/tribal partners to focus on educating the public about radon's health impact, testing and mitigation practices. During 2002, almost 91,000 homes were tested for radon in R5, while almost 9,000 homes have been mitigated and over 4,000 homes have been constructed using radon resistant building practices. Over 1/3 of the pledges collected nationally for EPA's Smoke Free Homes Campaign have been collected in Region 5 (Sept 2003), with over 4900 email/phone pledges collected by Region 5 staff, its partners and the general public response.

II - 1 - 8 01/15/2004

<sup>&</sup>lt;sup>3</sup> The 1994 baseline is assumed to be zero for purposes of tracking the results of EPA indoor air programs because the number of Americans experiencing healthier indoor air prior to 1994 is unknown.

The IAP has worked with its regional and national partners to achieve significant gains and participation in promoting healthier school environments. As of 2003 estimates, based on reports from our regional partners, well over 1700 of the Region 5 estimated 26,000 public and private schools (2001 Department of Education-based estimates) are implementing an Indoor Air Quality (IAQ) management plan consistent with USEPA's IAQ "Tools for Schools" management program.. That is 1700 schools of the approximate 4800 schools (September, 2003) nationally that have been identified by EPA and its partners as fully or partially implementing an IAQ management plan consistent with EPA's Tools for Schools (TfS) program.

IAP supports the Office of Radiation and Indoor Air's (ORIA) efforts to achieve its IAQ objectives. This includes continued commitment to Asthma, Environmental Tobacco Smoke, Schools and Radon programs. In addition, Region 5 supports ORIA's focus in "Developing Areas", including Air Toxics, Large Buildings, Residential IAQ, Mold, and a focus on Sensitive Populations, as well as other emerging issues. IAP will continue to work with internal and external partners, as resources allow, while also recognizing our partners' constraints (often decreasing budgets). IAP staff also continue to partner internally across programs (such as with the tribal program), allowing additional leveraging of existing resources.

B. What are the major problems in the region that need to be addressed in order to make progress toward the strategic objective?

Constraints to our program include Regional, State and Local staffing ability to address the broadening Indoor Air Quality (IAQ) concerns, budget constraints our partner and targeted areas (i.e., schools) are facing, and developing a comprehensive strategy that still manages to positively impact the indoor environments for the most number of people while still allowing to focus on sensitive populations and emerging issues.

Of the 62.4 million children in the U.S., 13.7 million reside in Region 5 states. One in 5 Americans (including adults) spend their time in schools. According to the 1996 Government Accounting Report, over half of the schools reported at least one environmental condition as being unsatisfactory, especially IAQ. In the same report, Region 5 schools stated that 86% of them needed to upgrade or repair on-site buildings to bring them up to good overall condition, while 47% reported unsatisfactory ventilation or IAQ.

Nearly 1 in 13 school-age children has asthma, and that rate is rising more rapidly in preschool-aged children than in any other group. Asthma is the leading cause of school absenteeism due to a chronic illness. The impact of asthma falls disproportionately on African-American and certain Hispanic populations and appears to be particularly severe in urban inner cities. Data from our cities shows there is often significant asthma rates in the urban areas. For example, data collected by Chicago Asthma Consortium members on asthma prevalence has revealed that 16% of children surveyed in the Chicago public and Catholic schools stated that a doctor had diagnosed them with asthma. The numbers were slightly higher in public schools and in schools with a predominance of African-American students. Similar findings were found in a study of children in the Chicago Head Start program, where 14% of this group was found to have asthma. In Region 5, many of our numerous cities have similar problems.

Some emerging issues include: Homeland Security and IAQ (Goal 4), with an emphasis on preventative education and recovery support; Grant Management in the Era of Competition; Integrating IAQ Science into Air Toxics Community Assessments; Cross-Programmatic Building-Based Support, which includes school environmental management systems (EMS) and other building system approaches (Goal 4), as well as supporting vapor intrusion concerns, and; Children's Health and Aging Initiative (Goal 4).

II - 1 - 9 01/15/2004

Outcomes/Desired Results	Regional Strategies
More of the nation's schools will adopt good IAQ management systems as a part of a multimedia approach to protect students and staff from all environmental contaminants.  Measure: Nationally, by 2008, approximately 7.8 million additional students & staff will experience improved IAQ in their schools.* By 2010, 5% of R5 school districts will adopt an EMS approach to school environmental health (Goal 4).	IAP will partner with other programs, agencies & tribes, NGOs, and schools to:  1) assist in the implementation of IAQ TfS to older, urban & rural areas  2) educate on asthma, IAQ, TfS, pesticides, and toxics,  3) encourage participation in Energy Star, Clean School Bus USA, Sunwise, etc.  4) maintain effective grant program prioritizing stakeholder investment, environmental management system development and education.  IAP will work on school-based EMS through the R5 Schools Network and Children's Health program. IAQ will continue to be one of the primary areas of concern for school EMS programs.  Evaluation: Use of data available in national tracking system & survey of schools for IAQ management plans. EMS to be tracked by Children's Health Program.
More students with asthma and their families will be better educated about managing asthma triggers in their home environment. Decrease the number of children exposed to ETS in the home environment  Measure: Nationally, by 2008, approximately 12.8 million additional people will be living in homes with healthier indoor air. These include people living in homes with radon-resistant features, children not being exposed to environmental tobacco smoke, and asthmatics with reduced exposure to indoor asthma triggers.*	Region supports States' development of asthma plans and community based initiatives to educate children and families.  Region will complement national initiatives by supporting outreach efforts.  Evaluation: Use data available in national tracking system.
More homes will be tested for radon levels; of those homes with high radon levels, more will be mitigated; new homes will be built with radon-resistant construction techniques.  Measure: Nationally, by 2008,	Region will complement national initiatives by supporting outreach activities, and partnering with stakeholders to incorporate radon resistant features.  Evaluation: Use data available in national tracking system.

II - 1 - 10 01/15/2004

Outcomes/Desired Results	Regional Strategies
approximately 12.8 million additional people will be living in homes with healthier indoor air. (etc).*	

<sup>\*</sup> All tracking is done at the Headquarters level and will not necessarily be scalable to the Regional contribution to meeting the National goal.

**Objective 1.3: Protect the Ozone Layer.** By 2010, through worldwide action, ozone concentrations in the stratosphere will have stopped declining and slowly begun the process of recovery, and the risk to human health from overexposure to ultraviolet (UV) radiation, particularly among susceptible subpopulations, such as children, will be reduced.

A. What is the current state of human health or environmental protection for this objective in the region and are there any relevant trends over time (i.e., what indicators or data specific to this objective characterize the current status and trends as context for the region's strategy)?

Scientific evidence amassed over the past 25 years has shown that chlorofluorocarbons and hydrochlorofluorocarbons (refrigerants), halons, (fire-extinguishing agents), methyl bromide (a pesticide), and other halogenated chemicals used around the world are depleting the stratospheric ozone layer. As a result, more harmful ultraviolet (UV) radiation is reaching the earth, increasing the risk of overexposure to radiation and consequent health effects, including skin cancer, cataracts, and other illnesses. More than a million new cases of skin cancer are diagnosed each year, and more than half of all Americans develop cataracts by the time they are 80 years old.

B. What are the major problems in the region that need to be addressed in order to make progress toward the strategic objective?

As a signatory to the Montreal Protocol on Substances That Deplete the Ozone Layer (Montreal Protocol), the United States is obligated to regulate and enforce its terms domestically. In accordance with this international treaty and related Clean Air Act requirements, EPA will continue to implement the domestic rule-making agenda for the reduction and control of ozone-depleting substances (ODS) and enforce rules controlling their production, import, and emission. This includes combining market-based regulatory approaches with sector-specific technology guidelines and facilitating the development and commercialization of alternatives to methyl bromide and HCFCs. EPA will strengthen outreach efforts to ensure efficient and effective compliance, and continue to identify and

II - 1 - 11 01/15/2004

<sup>&</sup>lt;sup>4</sup>World Meteorological Organization, *Scientific Assessment of Ozone Depletion*, 2002. Available on the Internet at <a href="https://www.unep.org/ozone/sap2002.shtml">www.unep.org/ozone/sap2002.shtml</a>.

<sup>&</sup>lt;sup>5</sup>American Cancer Society Inc., *Cancer Facts and Figures: 2003*, No. 5008.03, 2003. Available on the Internet at www.cancer.org/downloads/STT/CAFF2003PWSecured.pdf.

<sup>&</sup>lt;sup>6</sup>Prevent Blindness America, *Cataract Fact Sheet*, FS32, 2003. Available on the Internet at www.preventblindness.org/resources/factsheets/CataractsFS32.PDF.

promote safer alternatives to curtail ozone depletion. EPA estimates that in the United States alone between 1990 and 2165, the worldwide phase-out of ODS will save 6.3 million lives from fatal cases of skin cancer, avoid 299 million cases of nonfatal skin cancers, and avoid 27.5 million cases of cataracts.<sup>7</sup>

Because the ozone layer is not expected to recover until the middle of this century at the earliest, 8 the public will continue to be exposed to higher levels of UV radiation than existed prior to the use and emission of ODS.

Recognizing this and the public's current sun-exposure practices, EPA will continue education and outreach efforts, such as the Sun Wise program, to encourage behavioral changes as the primary means of reducing UV-related health risks. The SunWise program focuses in raising awareness of children to the risks sunburns pose from ultraviolet radiation, stratospheric ozone depletion and other health risks. Region 5 participates in health fairs, workshops and other outreach events to promote the program. Information is distributed on action steps, children's activities, the school program, and presentations are made on ultraviolet radiation.

Outcomes/Desired Results	Regional Strategies
Minimize emissions of CFCs and other ozone depleting (ODS) substances from Region 5 and	Much of these emissions have been addressed through national rulemakings phasing out the
educate the public regarding UV-related risks.	use of CFCs. Region 5 will continue to identify
	sectors that continue to use or release ozone-
	depleting substances (ODS) and use education,
	compliance and enforcement tools to minimize
	emissions. Region 5 will also disseminate Sun
	Wise materials to inform the public regarding
	the UV related risks from sun exposure.

**Objective 1.4: Radiation.** Through 2008, EPA and its partners and stakeholders will minimize unnecessary releases of radiation and be prepared to minimize impacts to human health and the environment should unwanted releases occur.

- A. What is the current state of human health or environmental protection for this objective in the region and are there any relevant trends over time (i.e., what indicators or data specific to this objective characterize the current status and trends as context for the region's strategy)?
- B. What are the major problems in the region that need to be addressed in order to make progress toward the strategic objective?

The mining and processing of naturally occurring radioactive materials for use in medicine, power generation, consumer products, and industry inevitably generate emissions and waste. EPA is the primary

II - 1 - 12 01/15/2004

<sup>&</sup>lt;sup>7</sup>Advisory Council on Clean Air Act Compliance Analysis, Science Advisory Board, *The Benefits and Costs of the Clean Air Act 1990-2010, EPA Report to Congress*, 1999.

<sup>&</sup>lt;sup>8</sup>World Meteorological Organization, *Scientific Assessment of Ozone Depletion*, 2002. Available on the Internet at <a href="https://www.unep.org/ozone/sap2002.shtml">www.unep.org/ozone/sap2002.shtml</a>.

federal agency charged with protecting people and the environment from harmful and avoidable exposure to radiation, and is the lead federal agency for responding to international emergencies involving radioactive materials. EPA also provides guidance and training to other federal and state agencies in preparing for emergencies at U.S. nuclear plants, transportation accidents involving shipments of radioactive materials, and acts of nuclear terrorism. EPA sets protective limits on radioactive emissions for all media—air, water, and soil—and we develop guidance for cleaning up radioactively contaminated Superfund sites.

Region 5's radiation program consists of two main components. The first component is lead by the Superfund program and involves Emergency Response and Superfund sites. This involves the identification and mitigation of radiation threats and radiological material. The Air and Radiation Division provides technical support as needed. The second component, housed in ARD, includes regulatory oversight of other Federal facilities, coordinating on Homeland Security issues, and providing the Region with the Radiation Safety oversight required by the Nuclear Regulatory Commission License, through the Health and Safety Office in Region 5.

Outcomes/Desired Results	Regional Strategies
Unnecessary releases of radiation minimized and should unwanted releases occur, impacts to human health and the environment minimized.	EPA provides national-level guidance on the risks posed by radioactive materials in the environment, including technical guidance for conducting risk assessments.  The Region supports Headquarter's mission as it applies to the States and Tribes within Region 5. We will monitor for radiation, arrange for its mitigation, and work to conduct outreach as appropriate. We will also provide technical guidance, advice and outreach as needed to assure that EPA meets all public health and environmental obligations. Region 5 will participate with FEMA, States and other Federal Agencies in nuclear emergency response drills.

**Objective 1.5: Reduce Greenhouse Gas Intensity.** Through EPA's voluntary climate protection programs, contribute 45 million metric tons of carbon equivalent (MMTCE) annually to the President's 18 percent greenhouse gas intensity improvement goal by 2012. (An additional 75 MMTCE to result from the sustained growth in the climate programs are reflected in the Administration's business-as-usual projection for greenhouse gas intensity improvement.<sup>9</sup>)

A. What is the current state of human health or environmental protection for this objective in the region and are there any relevant trends over time (i.e., what indicators or data specific to this objective characterize the current status and trends as context for the region's strategy)?

II - 1 - 13 01/15/2004

<sup>&</sup>lt;sup>9</sup> Overall, EPA's climate protection programs will prevent 185 MMTCE annually by 2012, up from 65 MMTCE in 2002. Of the additional 120 MMTCE that will be prevented annually by 2012, 75 MMTCE will result directly from the sustained growth in many of the climate programs and are reflected in the Administration's business-as-usual projection for GHG intensity improvement; 45 MMTCE will contribute to the attainment of the President's 18 percent GHG intensity improvement goal. The strategic targets outline the path for preventing the 120 MMTCE by 2012.

B. What are the major problems in the region that need to be addressed in order to make progress toward the strategic objective?

Region 5's Air and Radiation Division (ARD) has been working with the Office of Air and Radiation to achieve greenhouse gas reductions and the Office of Research and Development to disseminate information on the potential consequences of climate variability and change. It is important to understand some of the *potential* impacts of climate change in the Region and the current status of greenhouse gas emissions in the Region.

According to Great Lakes Regional Assessment Group for the US Global Change Research Program, "It is very likely that the US will get substantially warmer. Temperatures are projected to rise more rapidly in the next one hundred years than in the last 10,000 years. It is also very likely that there will be more precipitation overall, with more of it coming in heavy downpours. In spite of this, some areas are likely to get drier as increased evaporation due to higher temperatures outpaces increased precipitation. Drought and flash floods are likely to become more frequent and intense." Some of the potential impacts in the Midwest with respect to climate change include: reduction in lake and river levels, exacerbation of heat-related stresses due to urban heat island effect in cities, changes in natural ecosystems; and an increase in some agricultural yields.

Emissions of greenhouse gases result from many sectors: energy, industrial processes, agriculture, landuse change and forestry, and waste. Carbon Dioxide from fossil fuel combustion- the major source of energy in our homes, in commercial buildings, in industry, and for transportation —is the largest source of greenhouse gas emissions in the United States. Carbon dioxide emissions from fossil fuel combustion in Region 5 constitutes 20% of the national total CO<sub>2</sub> emissions from fossil fuel combustion on a million metric tons of carbon equivalent basis(MMTCE). National average greenhouse gas emissions by sector (emission from electrical generation is attributed to the sources using the electricity): Industry (29%), Transportation, (27%), Residential (19%), Service Industry(Buildings16%), and Agriculture (8%)<sup>11</sup>.

There are many voluntary programs aimed at reducing greenhouse gas emissions through initiatives that increase energy efficiency (Energy Star); develop clean energy solutions (Combined Heat and Power Partnership and Green Power Partnership); capture and use methane gas (Landfill Methane Outreach, Natural Gas STAR, Agriculture-Based Programs), and minimize emissions of high global warming potential gases (Voluntary Aluminum Industrial Partnership, HFC-23 Emission Reduction Program, Perfluorocarbons (PFC) Emission Reduction Program with Semiconductor Industry, Sulfurhexafluoride (SF<sub>6</sub>) Emission Reduction for Electric Power Systems and Magnesium Industry). Furthermore, there are two voluntary programs aimed to reduce greenhouse gas emissions in the transportation sector: Commuter Choice Leadership Initiative and SmartWay Transport Partnership. It is important to note that there are ancillary air quality benefits to reducing energy usage including reduction in NOx, SOx, particulate matter, and air toxics along with CO<sub>2</sub>.

II - 1 - 14 01/15/2004

<sup>&</sup>lt;sup>10</sup>Climate Change Impacts on the United States, The Potential Consequences of Climate Variability and Change, Overview, National Assessment Synthesis Team, US Global Change Research Program.

<sup>&</sup>lt;sup>11</sup> Inventory of US Green House Gas Emissions and Sinks: 1990-1999. April 2001. EPA-236-R-01-001.

The Energy Star label has become the national symbol for energy efficiency. Encouraging consumers to purchase Energy Star labeled products, working with building owners and managers to improve the energy performance of their facilities, and encouraging homeowners to improve the overall energy efficiency of their homes are the main initiatives to further drive energy efficiency and reduce greenhouse gas emissions. Region 5 continues to provide education and outreach programs on climate change, including the potential impacts and the voluntary actions the public and businesses can take to reduce greenhouse gas emissions. Public education and customer service are integral elements of our program in which we respond to inquiries on global warming and energy issues. Furthermore, we conduct presentations, participate in exhibits, and deliver education seminars aimed to increase awareness of energy efficiency opportunities and breakdown barriers to enhancing energy performance in facilities. The priority for Region 5's program is to educate the K-12 school sector on the Energy Star performance rating tool and to address barriers to energy improvements. This effort is also incorporated in the voluntary Indoor Air Quality Tools for Schools program and in partnership with Federal, State and local organizations.

Outcomes/Desired Results	Regional Strategies
Greenhouse gas intensity significantly reduced.	Support and promote Energy Efficiency and Clean Energy programs.
Measure: Millions of Metric Tons of carbon equivalent prevented from the building,	Work with Federal, State and local partners to market Energy Star Portfolio Manager focusing outreach to K-12 schools.
industrial and transportation sectors.*	Benchmark energy performance in buildings.
	<b>Measures:</b> By 2010, 500 buildings will be benchmarked using the Energy Star Performance Rating Tool.
(*This data is collected by HQ.)	

II - 1 - 15 01/15/2004

#### Goal 2 - Clean and Safe Water

- **Objective 2.1: Protect Human Health.** Protect human health by reducing exposure to contaminants in drinking water (including protecting source waters), in fish and shellfish, and in recreational waters.
  - **Subobjective 2.1.1:** Water Safe to Drink By 2008, 95 percent of the population served by community water systems will receive drinking water that meets all applicable health-based drinking water standards through effective treatment and source water protection.
  - **Subobjective 2.1.2: Fish and Shellfish Safe to Eat** By 2008, improve the quality of water and sediments to allow increased consumption of fish and shellfish.
  - **Subobjective 2.1.3: Water Safe for Swimming** By 2008, restore water quality to allow swimming in not less than 5% of the stream miles and lake acres identified by states in 2000 as having water quality unsafe for swimming.
- A. What is the current state of human health or environmental protection for this objective in the region and are there any relevant trends over time (i.e., what indicators or data specific to this objective characterize the current status and trends as context for the region's strategy)?
  - **Drinking Water** Two of the six Region 5 States currently assess for attainment of drinking water designated uses, Illinois and Indiana. These two States have reported some drinking water data for lakes indicating that 74,564 acres were fully meeting the use 74% of the total acres assessed. In addition, 25,602 acres were partially meeting the designated use over 25% of the total acres assessed; and 480 acres were not supporting the use less than 0.5% of the total acres assessed. Illinois assessed 70 lakes for drinking water designated use based on ambient nitrate and/or triazine data and all of these lakes were fully or partially meeting the designated use. Indiana's assessment is based on the need to apply algicide for taste and odor caused by algae since this is additional treatment to prepare the water for drinking. 12 out of 13 lakes assessed by Indiana were fully or partially meeting the designated use.
  - Safe Fish Roughly 25% of the water body impairments in the Region are based on fish consumption advisories. The most common contaminants causing the advisories are PCBs and mercury. Of the two, mercury is the more common, necessitating statewide consumption advisories in all Region 5 states. PCBs remain a problem in the Great Lakes and some inland waters (statewide for rivers in Indiana), but in contrast to mercury levels in fish, the levels of PCBs have shown dramatic declines over the years in response to the PCB ban of the 1970s and sediment remediation actions. Mercury contamination continues, largely the result of air deposition, and correcting the mercury contamination problem in the Region requires that we think beyond watersheds to look at regional or national approaches to limit emissions.
  - **Safe Swimming** Another common impairment results from pathogen contamination of swimming waters: 60% of the Region's lake acres were assessed for swimming and of those 65% were considered safe for swimming. Reported beach closings are increasing in Region 5, but that trend reflects a mixed message. On one hand we are encouraged that more communities and states are monitoring the quality of their swimming waters and using that information to protect the health of their bathers; but on the other, the elevated levels of pathogens often indicates an improperly treated wastewater discharge. Region 5 has over 40% of the nation's CSOs, an

II - 2 - 1 01/15/2004

undetermined number of SSOs, and rapidly growing urban areas that need to better control storm water runoff. Often they discharge directly into a water used for swimming or into the watershed that drains into a swimming water. All of these wet weather pollution sources represent potential sources of the pathogens that cause beach closings, and represent a priority for Regional action.

**<u>Region 5 Goals:</u>** In cooperation with our State partners, we have established a set of long term goals that fit each of the sub-objectives above:

- All people in Region 5 served by public water supplies will have water that is consistently safe to drink;
- All waters in Region 5 will support fish populations with safe levels of contaminants; and
- Designated swimming waters in Region 5 will be swimmable.

The Regional strategies identified below support commitments made in EnPPAs with terms that currently include FY '05. For those not covering FY '05, the Regional Plan will drive the discussion for the next round of EnPPA negotiations. While the TEAs are written more generally, they still align with the strategies identified in the Regional Plan.

B. What are the major problems in the region that need to be addressed in order to make progress toward the strategic objective?

While the water problems we are trying to solve are not unique, their causes may present unique challenges to the Region and States: we have 41% of the nation's CSOs; all six of our States have fish advisories largely the result of atmospheric deposition of mercury from global sources. Closure of Great Lakes beaches is a concern and our plan reflects our commitment to solving this problem. We are also concerned about emerging contaminant such as APEs. We have >40% of the nation's non-community water systems.

Outcomes/Desired Results	Regional Strategies
Subobjective 2.1.1: Water Safe to Drink	
By 2008, 95 percent of the population served by community	Implement the public water supply program for Tribal systems.
water systems will receive drinking water that meets all applicable health-based drinking	Provide technical assistance, e.g. certify operators for tribal systems, to develop local capacity.
water standards through effective treatment and source water protection. (OW Strategic Plan 2.1.1)	Support States and water systems in effective implementation of standards.
R5 Goal: All people in Region 5 served by public water supplies will have	Compile, analyze and utilize data to identify and target program and enforcement tools at biggest/highest risk public health problems.
water that is consistently safe to drink.	Develop or revise drinking water standards to assure safe drinking water.

II - 2 - 2 01/15/2004

Outcomes/Desired Results	Regional Strategies
R5 Indicator: % of people served by public water systems that meet health based standards.	Protect sources of drinking water from contamination.  Improve State capacity to conduct SWAs.  Integrate water programs to protect sources of Drinking Water from contamination.  To provide Tribes with technical assistance and training: - Provide funding, technical support and training for SWA and SWP Develop ANPRM for Tribal core water quality standards.  Evaluation: The following three tiered approach to evaluations will be used. The Water Division will  follow the National Water Program's Program Assessment Framework which describes how a range of program management and evaluation activities are expected to support the effective assessment of water program performance. Further information can be found at www.XXXXX.  on a regular basis once baselines are developed, work with the States and Tribes to determine whether we are achieving the desired results associated with our Shared Goals. The Shared Goals are intended to allow us to show trends in Region 5's water quality. Some of the data is already complete enough to report on trends, others require data improvements before a baseline can be established. The Water Division is currently developing fact sheets to define the baselines for our environmental concerns. The Water Division is working with the Tribes on baseline reporting format.  use quarterly reviews, especially mid-year, to assess the effectiveness of our strategies and determine if any change in direction is needed.
Sub-objective 2.1.2: Fish and Shellfish Safe to Eat	
By 2008, improve the quality of water and sediments to allow increased consumption of fish and shellfish. (OW Strategic Plan 2.1.2) <b>R5 Goal:</b> All waters in Region 5 will	<ul> <li>Region 5 will support state implementation of the GLI by developing pollutant minimization plan guidance to reduce Hg loadings into POTWs by XX% by 200X.</li> <li>Region 5 will identify priority industrial point sources of mercury and ensure that mercury discharges are eliminated or reduced to GLI-based WQBELs by 2006.</li> <li>Region 5 will assist states with TMDLs so that at least one state has developed and issued a statewide or regional TMDL for</li> </ul>

II - 2 - 3 01/15/2004

Outcomes/Desired Results	Regional Strategies
support fish populations with safe levels of contaminants.  R5 Indicator: Concentration of selected contaminants in the tissue of targeted fish species; HG and PCBs for all 6 States	mercury by 2006.  Establish a regional network to measure fish tissue contaminant trends and investigate/assess occurrence of emerging contaminants.  To provide Tribes with technical assistance and training:  - Assist with fish advisories.  - Tribal fish contaminant report, tentative 12/04.  - Provide Stormwater MS4 Train-The-Trainer training.  - Provide outreach on construction general permits.  - Provide outreach on industrial activity permitting.
	<ul> <li>Evaluation:     The following three tiered approach to evaluations will be used. The Water Division will     follow the National Water Program's Program     Assessment Framework which describes how a range of program management and evaluation activities are expected to support the effective assessment of water program performance. Further information can be found at www.XXXXX.</li> <li>on a regular basis once baselines are developed, work with the States and Tribes to determine whether we are achieving the desired results associated with our Shared Goals. The Shared Goals are intended to allow us to show trends in Region 5's water quality. Some of the data is already complete enough to report on trends, others require data improvements before a baseline can be established. The Water Division is currently developing fact sheets to define the baselines for our environmental concerns. The Water Division is working with the Tribes on baseline reporting format.</li> <li>use quarterly reviews, especially mid-year, to assess the effectiveness of our strategies and determine if any change in direction is needed.</li> </ul>
Sub-objective 2.1.3: Water Safe for Swimming	
By 2008, restore water quality to allow swimming in not less than 5 percent of the stream miles and lake acres identified by states in 2000 as having water quality unsafe for swimming. (OW Strategic Plan 2.1.3)	Protect recreational water; Protect the quality of public beaches along the coasts and Great lakes.  Provide education and outreach thorough, e.g., workshops, for public and beach managers.  Build local capacity.

II - 2 - 4 01/15/2004

Outcomes/Desired Results	Regional Strategies
R5 Goal: Designated swimming waters in Region 5 will be swimmable.	Identify and target high priority coastal beaches for control of CSOs, SSOs and storm water runoff: - Region 5 CSO/SSO strategy implementation Region 5 Stormwater Phase II Strategy implementation.
R5 Indicator:  > By 2005, 100% of all CSO permits in the Great Lakes basin will be consistent with the national CSO Policy.  > By April 2004, all Great Lakes States will adopt bacteria criteria at least as protective as USEPA's Ambient Water Quality Criteria for Bacteria.  > By 2005, water quality monitoring and public notification programs will comply w/ National Beaches Guidance at 95% of all high priority GL beaches.	Develop, review and approve TMDLs in high priority beaches/swimming areas.  Identify high priority, susceptible swimming waters not yet impaired and establish controls to prevent contamination  Chicago River Focus Area - Promote safe recreational use of Chicago River through CSO/SSO control, POTW effluent disinfection, public outreach and WQS updates.  Milwaukee River Focus Area - Promote safe recreational use of the Lake Michigan beaches in SE WI and NE IL through CSO/SSO/SW control and watershed planning.  St. Joseph River Watershed - Promote safe recreational use of the St. Joseph River and protect Lake Michigan through coordinated (IN/MI) TMDL development and CSO/SSO/SW control, especially in Elkhart, South Bend and Mishawauka, IN  Cuvahoga River Focus Area - Promote safe recreational use of
	the Lower Cuyahoga River and Lake Erie beaches in the Cleveland, Ohio area through CSO/SSO control  Maumee River Watershed - Promote safe recreational use of the Lake Erie beaches near Toledo, OH and improved water quality throughout the watershed through CSO/SSO/SW control, TMDL development, CAFO control and promoting opportunities for water quality trading between agricultural and point sources.
	To provide Tribes with technical assistance and training:  - Develop ANPRM for Tribal core water quality standards  - Provide Stormwater MS4 Train-The-Trainer training.  - Provide outreach on construction general permits.  - Provide outreach on industrial activity permitting.  Evaluation:  The following three tiered approach to evaluations will be used. The Water Division will  • follow the National Water Program's Program  Assessment Framework which describes how a range of program management and evaluation activities are

II - 2 - 5 01/15/2004

Outcomes/Desired Results	Regional Strategies
	expected to support the effective assessment of water program performance. Further information can be found at www.XXXXX.  • on a regular basis once baselines are developed, work with the States and Tribes to determine whether we are achieving the desired results associated with our Shared Goals. The Shared Goals are intended to allow us to show trends in Region 5's water quality. Some of the data is already complete enough to report on trends, others require data improvements before a baseline can be established. The Water Division is currently developing fact sheets to define the baselines for our environmental concerns. The Water Division is working with the Tribes on baseline reporting format.  • use quarterly reviews, especially mid-year, to assess the effectiveness of our strategies and determine if any change in direction is needed.

**Objective 2.2:** <u>Protect Water Quality.</u> Protect the quality of rivers, lakes and streams on a watershed basis and protect coastal and ocean waters.

**Subobjective 2.2.1: Improve Water Quality on a Watershed Basis:** By 2008, use both pollution prevention and restoration approaches, so that, in 600 of the Nation's watersheds, water quality standards are met in at least 80 percent of the assessed water segments and in 200 watersheds, all assessed water segments maintain their quality and at least 20 percent of assessed water segments show improvement above conditions as of 2002.

A. What is the current state of human health or environmental protection for this objective in the region and are there any relevant trends over time (i.e., what indicators or data specific to this objective characterize the current status and trends as context for the region's strategy)?

**Aquatic Life Use** - Of the almost 370,000 river and stream miles in Region 5, 30% were assessed for aquatic life use. Approximately 67% of these assessed miles are meeting the use. Of the 5.8 million inland lake acres in Region 5, 9% were assessed for aquatic life use. Approximately 74% of the assessed lake acres are meeting the use.

Note that the information presented for most States focuses on only a limited subset of waters and usually this cannot be extrapolated to determine the status of all waters in a State or in the Region. One exception in Region 5 is Indiana which can now make state-wide estimates of attainment based on a random sampling design for aquatic life use of streams. States also have differing water quality standards, monitoring methods, and assessment protocols that can make direct comparisons of data difficult. Trends are not easily developed as States typically do not assess all their waters over a two year time frame and thus report on different subsets of waters in

II - 2 - 6 01/15/2004

each reporting cycle. Information exists that shows water quality improvement in specific watersheds as a result of the implementation of watershed programs (e.g., Spring Creek, WI; Minnesota River, MN), but that information cannot be extrapolated to suggest a Regional trend.

**Region 5 Goal:** We have established an additional goal for Region 5 with our State partners: *All waters in Region 5 will support healthy biological communities*. Within our WQS program, the development of comparable State bio-assessment programs and bio-criteria is a top priority so that we can directly measure the biological health of the aquatic resources. This work will have a greater impact than some of the routine reviews of State WQSs, and we are proposing to place some of those reviews on a slower track to meet our goal.

The Regional strategies identified below support commitments made in EnPPAs with terms that currently include FY '05. For those not covering FY '05, the Regional Plan will drive the discussion for the next round of EnPPA negotiations. While the TEAs are written more generally, they still align with the strategies identified in the Regional Plan.

B. What are the major problems in the region that need to be addressed in order to make progress toward the strategic objective?

For Rivers and streams assessed for aquatic life use, about 50% are impaired due to non-point sources! Such issues as nutrients, siltation, habitat alterations, and other related issues are among the most common causes of water quality problems sited for both rivers/streams and lakes. Agriculture and other nonpoint sources are predominant sources for impairments in streams.

In addition, we share in the stewardship of the Upper Mississippi River and are committed to helping solve the nutrient problems impacting the hypoxia zone in the Gulf of Mexico. Agriculture is very important to the economy and environment in Region 5 and our plan reflects a strong commitment to partnerships with Agriculture to improve water quality.

Outcomes/Desired Results	Regional Strategies
Sub-objective 2.2.1: Improve Water Quality on a Watershed Basis	
By 2008, use both pollution prevention and restoration approaches, so that:	Strengthen the water quality standards program by building State and Tribal capacity for bioassessment and biocriteria programs.
- in 600 of the Nation's watersheds, water quality standards are met in at least 80 percent of the assessed water	Strengthen the water quality standards program by developing Regional monitoring and assessment expertise and promoting state programs for bioassessment.
segments; and - in 200 watersheds, all assessed water segments maintain their quality and at least 20 percent of	Strengthen the state and tribal water quality standards program by developing State Nutrient Criteria through - Consultations with USFWS Technical assistance to Tribes on WQS.
assessed water segments show improvement above conditions as of 2002. (OW Strategic Plan 2.2.1)	- Reviewing and approving Tribal TAS applications.  Implement effective NPS pollution control programs.
R5 Goal: All waters in Region 5 will	Institutionalize the problem-solving approach to focus our work on correcting the most important water problems.

II - 2 - 7 01/15/2004

Outcomes/Desired Results	Regional Strategies
support healthy biological communities	Employ GIS tools and mapping to implement the problem-solving approach.
R5 Indicator: % of assessed river and stream miles, lake acres, Great lakes acres and shoreline miles and	Establish effective partnerships with agriculture in each state to collaboratively solve water quality problems caused by nonpoint source pollution.
wetlands, and % acres meeting aquatic life use criteria and	Leverage Farm Bill funds.
biocriteria targets, as well as other parameters used by States in making assessments, e.g. nutrient information.	<u>Hypoxia Action Plan</u> - Focus on Upper Mississippi River and Illinois River by facilitating interstate cooperation, promoting agricultural conservation program investment in impaired waters, and promoting trading opportunities and nutrient farming study in the Illinois River watershed.
	Improve water quality monitoring by building State and Tribal capacity.
	Support Central basin E-MAP Project.
	Develop effective watershed plans and TMDLs.
	Strengthen the NPDES permitting program.
	Effectively manage infrastructure assistance programs through effective management of SRFs.
	Effectively manage infrastructure assistance programs through State oversight/audits.
	To provide Tribes with technical assistance and training: - Provide technical assistance for Tribes on NPDES and Phase II stormwater implementation Work with Tribes to develop reporting format and encourage use of STORET.
	<ul> <li>Evaluation:         <ul> <li>The following three tiered approach to evaluations will be used.</li> <li>The Water Division will</li> <li>follow the National Water Program's Program</li></ul></li></ul>

II - 2 - 8 01/15/2004

Outcomes/Desired Results	Regional Strategies
	is already complete enough to report on trends, others require data improvements before a baseline can be established. The Water Division is currently developing fact sheets to define the baselines for our environmental concerns. The Water Division is working with the Tribes on baseline reporting format.  • use quarterly reviews, especially mid-year, to assess the effectiveness of our strategies and determine if any change in direction is needed.

II - 2 - 9 01/15/2004

#### **Goal 3 -** Land Preservation and Restoration

Preserve and restore the land by using innovative waste management practices and cleaning up contaminated properties to reduce risks posed by releases of harmful substances.

**Objective 3.1: Preserve Land.** By 2008, reduce adverse effects to land by reducing waste generation, increasing recycling, and ensuring proper management of waste and petroleum products at facilities in ways that prevent releases.

**Subobjective 3.1.1: Reduce Waste Generation and Increase Recycling**. by 2008, reduce materials use through product and process redesign, and increase materials and energy recovery from wastes otherwise requiring disposal.

**Subobjective 3.1.2: Manage Hazardous Wastes and Petroleum Products Properly.** By 2008, reduce releases to the environment by managing hazardous wastes and petroleum products properly.

A. What is the current state of human health or environmental protection for this objective in the region and are there any relevant trends over time (i.e., what indicators or data specific to this objective characterize the current status and trends as context for the region's strategy)?

Underground Storage Tank (UST) Program - There are currently over 117,900 active USTs in Region 5. Since 1998, practically all USTs (almost 100%) have installed the equipment required under the UST regulations. However, we are still getting new releases and spills. The problem is related to the fact that a large percentage of the UST owners are not maintaining or operating the equipment properly. So, USEPA is attempting to implement a new compliance measurement call "significant operational compliance" (SOC) for both leak detection and release prevention (spill, overfill, and corrosion protection). After measuring SOC for two years, data show that 76% of active USTs in Region 5 are in SOC with release prevention and 64% are in SOC with leak detection.

RCRA Permitting Program - All of the Region 5 states have attained the 2003 GPRA RCRA goal of 74% for their combined permitting universe under control. As of March 2003, there were 200 out of 214 facilities in the operating permit universe under control and 219 out of 282 post-closure universe facilities under control in Region 5. Therefore, the combined Region 5 permitting universe is currently 84% under control. Two Region 5 states—Minnesota and Wisconsin—have all their operating and post-closure universe facilities under control. In addition, Illinois has all its operating universe facilities under control.

Nonhazardous Solid Waste and Hazardous Waste Minimization Programs - One of the ways Region 5 hopes to reduce persistent, bioaccumulative and toxic (PBT) chemicals is by implementing a sector-based approach focusing on lead (Pb) and naphthalene generators. The intent is to involve all RCRA programs (permitting, corrective action, enforcement and compliance assistance, waste minimization, etc.), other media programs (TSCA, FIFRA, EPCRA 313), and states in this effort. Part of the strategy is to promote participation in the National Waste Minimization Recognition Program to these generators. The Region will also continue to promote hospital participation in the Hospitals for a Healthy Environment (H2E) program in an effort to reduce mercury. We will also continue to promote increases in safe hazardous waste

II - 3 - 1 01/15/2004

recycling. Continuing in FY 2003 and beyond, we will be reviewing the processes and programs utilized by Region 5 states to clean up and remediate pesticide spills at facilities that handle the mixing, blending, loading, and unloading of agricultural chemicals. We will be developing a summary of existing state programs, with recommendations which may describe opportunities for USEPA to support the cleanup of such facilities.

Region 5 will continue to respond to ever-increasing requests from Region 5 states and citizens for assistance on all non-hazardous waste streams. For example, approximately 35% of citizen tips, controlled correspondence, and requests for compliance/technical assistance fall under the Subtitle D category. The movement of municipal solid waste from Canada to landfills in Michigan, the disposal of animal carcasses infected by chronic wasting disease, and questionably managed construction and demolition debris facilities are recent examples of the many new issues that are appearing more frequently. State directors from the Regions 5 and 7 states have formed the Upper Midwest States Solid Waste Summit specifically to address the increasing complexity of nonhazardous solid waste issues. Meanwhile, Region 5 will continue to target four industry sectors for waste reduction and recycling: health care (hospitals), metal casting, construction/demolition, and electronics.

The region is an active participant in the Resource Conservation Challenge (RCC). Our ongoing Regional activities to address electronic and hospital wastes, identify and promote beneficial uses for certain industrial wastes, and the management of scrap tires are consistent with the goals of the RCC. Several RCC "clusters" have been established for the waste streams mentioned above. Region 5 is the lead for the Industrial Waste and Schools clusters, and actively participates on several others. One project currently underway involves an inventory and GIS mapping of all remaining scrap tire stockpiles in Michigan, Indiana, Ohio, Pennsylvania, and New York, and to develop a best practices guide for stockpile cleanup in the Great Lakes Basin. Finally, to encourage the states to participate in the RCC, we have offered each state a \$75,000 grant to support activities related to the RCC. All six Region 5 states have submitted RCC proposals that are being approved.

B. What are the major problems in the region that need to be addressed in order to make progress toward the strategic objective?

**Underground Storage Tank (UST) Program** - We are seeing low operational compliance rates in spite of the fact that almost all USTs have installed equipment required under the regulations. Inconsistent and inaccurate measurement of operation compliance is a contributing factor. We plan to implement the new significant operational compliance tool developed by a USEPA/state workgroup to gather more accurate compliance data. From this data we should be able to implement more effective tools to address noncompliance.

**RCRA Permitting Program** - The permitting universe size varies from state to state. As a result, some states have made greater progress than others in terms of the percentage of accomplishments (facilities "under control") to date. Additional resource pressures are felt by many states who are losing experienced staff due to state-offered early retirement, reduced resources, and decentralized programs.

Nonhazardous Solid Waste and Hazardous Waste Minimization Programs - 1) All nonhazardous solid waste streams, not just municipal solid waste—particularly those of the most concern to our stakeholders, e.g., construction and demolition debris, scrap tire piles, industrial

II - 3 - 2 01/15/2004

wastes, illegal dumps, and animal carcasses infected by chronic wasting disease (CWD). 2) Implementation of the Resource Conservation Challenge (RCC) for many of the targeted waste streams and chemicals. 3) Support existing and develop new measurement systems to appropriately evaluate program effectiveness, GPRA goals attainment, and track environmental results.

Outcomes/Desired Results	Regional Strategies
Subobjective 3.1.1 Nonhazardous Solid Waste and Hazardous Waste Minimization Programs:  1. Resource conservation RCRA activities along with source reduction/reuse/recycling programs are robust and fully funded.  2. Nonhazardous solid waste facilities and sites are managed in such a way that harmful releases to the environment are prevented.  Measures:  1. Percentage increase in recycling of nonhazardous solid waste.  2. Nonhazardous solid waste generation rate maintained at no more than 4.5 pounds/person/day.	1. Provide technical and compliance assistance to state/local solid waste contacts as well as broker state/local waste management issues to national forums for consideration and resolution (e.g., disposal of animal carcasses infected by chronic wasting disease).  2. Promote elements of the Resource Conservation Challenge.  3. Promote Greening of the Government Executive Orders.  4. Promote voluntary initiative and partnership programs that emphasize source reduction, reuse, and recycling.  5. Participate in national and regional efforts to improve source reduction/reuse/recycling data collection and measurement.  Evaluation: Region will include an evaluation method and schedule for this strategy by 12/31/03.
Waste minimization is integrated into the base RCRA program activities (permitting, corrective action, enforcement, and compliance assistance) and non-regulatory/voluntary activities to best achieve reductions in the 30 targeted chemicals.  Measures:  1. Percentage reduction in generation of priority list chemicals from 1991.	Through 2008, WPTD will promote the National Waste Minimization Partnership Program to Region 5 facilities, select specific sectors/targeted chemicals for particular emphasis, host forums/workshops on the targeted chemicals for interested stakeholders, and promote hazardous waste recycling activities.  Evaluation: Region will include an evaluation method and schedule for this strategy by 12/31/03.
Subobjective 3.1.2 Preventing Hazardous Releases from RCRA Facilities:	1. Provide assistance to the states. Specifically, use Regional expertise and resources to work with states that have larger workloads, particularly in

II - 3 - 3 01/15/2004

Outcomes/Desired Results	Regional Strategies
Increase the number of permit accomplishments while maintaining a good working relationship and sharing information with the states.  Measures: Percentage of RCRA hazardous waste facilities with permits/permit renewal or other approved controls.	specialized areas like combustion.  2. Reduce the burden on regulated RCRA facilities through the delisting process while ensuring that wastes are still managed under the Subtitle D program.
	<b>Evaluation:</b> Region will include an evaluation method and schedule for this strategy by 12/31/03.
Preventing Releases from Underground Storage Tank Systems:  1. Increase the number of facilities in significant operational compliance with leak detection and prevention requirements.  2. Reduce the annual number of new confirmed releases.	Provide support to state UST programs and strengthen partnerships among all stakeholders to reduce releases to the environment through cooperative agreements, STAG and project grants, technical assistance, and training.   Evaluation:  Region will include an evaluation method and schedule for this strategy by 12/31/03.
Measures: 1. Number of facilities in significant operational compliance with leak detection and prevention requirements.  2. Number of new confirmed releases.	schedule for this strategy by 12/31/03.

**Objective 3.2: Restore Land.** By 2008, control the risks to human health and the environment by mitigating the impact of accidental or intentional releases and by cleaning up and restoring contaminated sites or properties to appropriate levels.

**Subobjective 3.2.1: Prepare for and Respond to Accidental and Intentional Releases.** By 2008, reduce and control the risks posed by accidental and intentional releases of harmful substances by improving our nation's capability to prepare for and respond more effectively to these emergencies.

**Subobjective 3.2.2: Clean Up and Reuse Contaminated Land.** By 2008, control the risks to human health and the environment at contaminated properties or sites through cleanup, stabilization, or other action, and make land available for reuse.

Subobjective 3.2.3: Maximize Potentially Responsible Party Participation at Superfund Sites. Each year through 2008, make sure that potentially responsible parties conduct or pay for Superfund cleanups whenever possible.

II - 3 - 4 01/15/2004

A. What is the current state of human health or environmental protection for this objective in the region and are there any relevant trends over time (i.e., what indicators or data specific to this objective characterize the current status and trends as context for the region's strategy)?

Emergency Preparedness and Response/Homeland Security - In FY2002, we hired eight additional On-Scene Coordinators (OSCs)—some of whom had specialities in chemical, biological, and radiological response—bringing our total number of OSCs to 35. In recent years, we have also purchased additional field response equipment and developed the capability to support hazardous material/terrorism response at special national events (e.g., Olympics, MLB All-Star Game, etc.). In FY2003, we opened a response office in St. Paul, Minnesota, and are working on opening an office in Des Plaines, Illinois that will bring our total to six response offices throughout the Region. The Des Plaines office will also serve as a backup to the downtown Chicago office in the event there is an attack on the city. We have also enhanced or developed our Emergency Operations Center (EOC) capability in the Chicago, Des Plaines, and Grosse Ile, Michigan, offices. For approximately the past seven years, we have conducted advanced Level A training twice a year for OSCs, along with chemical, biological, and radiological training, and have participated in tabletop and full-scale field exercises with federal, state, tribal, and local agencies to enhance our preparedness to respond to emergency events.

Superfund and Oil Spill Removal Response - Over the past five years, there has been an increasing trend in the number of Superfund removal response sites completed each year (from 45 in FY1998 to 61 in FY2002). There has also been an increase in the number of more complex and costly removal sites. The number of lead, mercury, and sediments sites, in particular, has increased in recent years, possibly due to more awareness from news stories covering the cleanups. In addition, as state budgets become tighter, we are being asked to address more sites that the states cannot fund. During this same timeframe, the number of oil spill responses has remained within a range of 24 to 28 cleanups per year, with a spike of 36 cleanups in FY1999.

Oil Spill Program - The number of inspections to determine compliance with the spill prevention, control, and countermeasure (SPCC) regulations is dependent on the amount of funding received each year and competing priorities. Recently, the number of facilities inspected has remained fairly constant at around 50 per year. At the time of inspection, very few facilities are in full compliance; however, with the Region's assistance, most of these facilities ultimately are brought into compliance. Even so, since the universe of facilities is unknown and the number of facilities inspected is a small percentage of the likely universe, this number should not be extrapolated to assume that the same percentage of facilities are in compliance throughout the entire region.

**Superfund Site Assessment** - As of October 2003, the Region had completed assessment work at 88% of the sites in the CERCLIS database (6,982 out of 7,920 sites, per the SCAP-15 report). There are currently about 350 sites in the site assessment workload. About 25 new sites are added to the workload each year, with a slight trend towards larger, more complex sites being referred in recent years due to bankruptcies and other economic conditions.

**Superfund Remedial** - Region 5 contains 284 (approximately 19%) of the 1518 national priorities list (NPL) sites in the country. Of these, 246 sites have human exposure under control (out of a baseline of 276 sites) and 186 sites have contaminated ground water migration under control (out of a baseline of 244 sites), while 220 (equivalent to 77%) have reached construction completion and 57 (20%) have been deleted from the NPL, thereby controlling or eliminating

II - 3 - 5 01/15/2004

long-term risk at the sites. The number of construction completions over the past 10 years has ranged from 29 in FY1995 to 5 in FY2003. The annual number of construction completions has significantly declined in recent years and will total 10 or less per year through at least FY2007. This decline is due to the fact that relatively few new sites were added to the NPL in Region 5 during the 1990s. Nevertheless, Region 5 led the nation in construction completions from FY1992 through FY2002, with the percentage of sites completed in Region 5 now standing at 77%, compared with the other nine regions collectively averaging 54%. We project that over 90% of our NPL sites will have achieved construction completion by the end of FY2007.

Within the NPL and Superfund Alternative Site (SAS) universe, Region 5 has a larger proportion of sediments sites than other regions due to the presence of the Great Lakes. Sediment sites typically fall into the "mega-site" category, making them more complex and more costly to clean up than other NPL sites.

*RCRA Corrective Action* - The RCRA corrective action program is currently focusing its efforts on the 284 high-priority GPRA baseline facilities. There are approximately 1,600 facilities subject to RCRA corrective action, including the most difficult GPRA baseline facilities, which have not been addressed, and final cleanup has occurred at only a small fraction of the regulated facilities. Of the 284 high-priority facilities, human exposure to toxins is under control at 175 facilities and toxic releases to ground water are under control at 155 facilities.

**Leaking Underground Storage Tank (LUST) Program** - As of March 2003, there were more than 98,000 confirmed releases from USTs in Region 5. Cleanup has been initiated at about 95% (93,800) of the sites and cleanup has been completed at approximately 67,000 sites. This leaves a cleanup backlog of about 31,000 sites or 32%, which is equal to the national backlog. Our goal is to reduce the cleanup backlog by 50% over the next five years.

**Superfund Enforcement** - The percentage of remedial actions started at NPL sites that are PRP-lead has ranged from 67% in FY1998 to 100% in FY2001 and FY2003. While there is no trend over these five years, Region 5 has exceeded the previous goal of 70% PRP-lead sites every year since FY1999.

B. What are the major problems in the region that need to be addressed in order to make progress toward the strategic objective?

*Emergency Preparedness and Response/Homeland Security* - Additional resources will be needed over the next several years in order to fund the additional OSCs and emergency response (ER) equipment necessary to satisfactorily respond to a catastrophic incident.

Superfund and Oil Spill Removal Response - 1) The scope of the removal portion of the Superfund program has been increasing in recent years: the more the program is asked to do, the more people ask of it. The increase in the amount of training and exercises in recent years has also demanded more time from managers and staff that would otherwise be spent directly on cleanups. Due to these increased demands on the program, we can no longer respond to all sites brought to us and must prioritize what we can do with the available resources. 2) Funding received from the Coast Guard-managed emergency portion of the Oil Spill Liability Trust Fund (OSLTF) is not sufficient to address all discharges that impact or threaten navigable waterways. 3) USEPA and the Coast Guard sometimes disagree on cleanup-related issues. We need Headquarters to be more assertive in resolving these differences and include the regions more in

II - 3 - 6 01/15/2004

these discussions.

*Oil Spill Program* - Agency-appropriated funds are not sufficient to address the preparedness, prevention, response infrastructure, and enforcement portions of the oil spill program. For example, if more funding were available for inspections and compliance assistance, we would be better able to assist more facilities in achieving compliance.

**Superfund Site Assessment** - 1) Due to the national Urban Smelter Initiative, lead smelter sites are a high priority in the Region for the site assessment program. 2) Decreases in the site assessment budget in recent years have made it increasingly difficult to complete site assessment work.

**Superfund Remedial** - The Superfund remedial program needs to ensure that it maintains an appropriate balance each year between the number of sites initiating remedial investigations and the number of sites reaching construction completion. This is difficult to do with the current limited level of resources and Headquarters emphasis on achieving construction completions. In addition, if funding remains below anticipated needs, resources will need to be shifted from the Pipeline Operations budget to the Remedial Action allowance in order to achieve construction completion targets. This will put a further strain on the overall budget.

Because Region 5 has a large percentage of NPL sites that are construction complete, we also have a greater number of sites that are ready for state takeover of site operations and maintenance (O & M). Due to recent state budget shortfalls, we are concerned about our states' ability to take over the O&M phase. Several states in the region have raised this concern.

RCRA Corrective Action - All states in Region 5 are authorized to implement the RCRA corrective action program. The remaining facilities without environmental indicator (EI) determinations are the most complex or administratively difficult. Without successful years from the states, the Region is unlikely to meet GPRA goals. The major need for state RCRA corrective action programs for FY2003 and beyond is increased funding. Base federal funding has not increased in over ten years. Extramural funds from Headquarters decreased 22% this year, which means that the Region has less funding to support the RCRA corrective action program through contract support. Another problem the Region is facing is ensuring that all non-GPRA high-priority RCRA facilities are also addressed.

Leaking Underground Storage Tank (LUST) Program - Barriers that may make it difficult to achieve the 50% cleanup backlog objective include: 1) inadequate staffing levels due to state budget problems and "flat" federal funding, 2) an increasing number of recalcitrant or insolvent owner/operators, which leads to a more resource-intensive and time-consuming enforcement process, 3) inadequate financial responsibility or no state cleanup fund that means no resources to start remediation, and 4) an increasing number of difficult sites that slows the pace of cleanups.

Superfund Enforcement - No problems identified to date.

II - 3 - 7 01/15/2004

Outcomes/Desired Results	Regional Strategies
Subobjective 3.2.1 Emergency Preparedness and Response/Homeland Security:	1. Increase resources (e.g., staff, equipment, facilities) available to respond to emergencies.
Emergencies are responded to in a manner that quickly addresses short-term risk and minimizes long-term risks to human health and the environment.  Measure: Capability to coordinate and respond to at least one large-scale emergency within the Region, or assist Headquarters or other regions with one or more catastrophic emergencies.	<ol> <li>Improve responders' knowledge and skills in emergency response.</li> <li>Develop and coordinate response capabilities with other federal agencies, including integrating Regional programs and activities with those in the Office of Homeland Security; other regions; and state, tribal, and local governments.</li> <li>Evaluation:         After each classic emergency response, the Region will informally evaluate if the staff, equipment, facilities, and coordination were adequate, and make adjustments accordingly. If any catastrophic events occur, Headquarters/ OSWER will conduct a formal evaluation and issue a report on the response action, including recommended improvements.     </li> </ol>
Eliminate or control human health and environmental risks from oil spills and Superfund removal sites.  Measure: Number of cleanups completed.	<ol> <li>Identify and prioritize sites, or discharges that impact or threaten navigable waterways.</li> <li>Work with state agencies to make full use of all available federal and state response resources, including those of responsible parties (RPs)/potentially responsible parties (PRPs).</li> <li>Direct or monitor removal actions.</li> <li>Evaluation:         <ul> <li>In FY2005, the SFD will perform an analysis of what removal work needed to be done in recent years, what funding the Region received and how it was used, what work was not able to be accomplished, and any adjustments needed.</li> </ul> </li> </ol>
Oil Spill Prevention:  Decrease the number of oil discharges which impact or threaten the waters of the U.S.  Measures:  1. Change in the number of discharges from oil facilities from FY2000 to FY2006.	Use a combination of inspections, compliance assistance, exercises, planning, and enforcement to ensure that facilities are in compliance with SPCC and facility response plan (FRP) requirements, and that responders are prepared to respond.  Evaluation: Region will include an evaluation method and schedule for this strategy before the Plan is

II - 3 - 8 01/15/2004

Outcomes/Desired Results	Regional Strategies
2. Change in the volume of oil released from facilities from FY2000 to FY2006. –NOTE: While we would like to use this measure, it could be very difficult to collect the data, which also would be very inaccurate. We include the measure here for potential future consideration, but we will not be measuring this during the FY2004-FY2006 cycle.	finalized.
Subobjective 3.2.2 Superfund Site Assessment:  Priority sites are identified and referred to the appropriate program for cleanup.  Measures:  1. Number of sites in site assessment backlog.  2. Time from site discovery to final assessment decision.	<ol> <li>Communicate regularly with states on CERCLIS lists, site work, and priorities, including review reports of state investigations to screen for potential need for federal action.</li> <li>Work closely with states to screen sites out of CERCLIS by using all available data.</li> <li>Combine assessments when appropriate to accelerate decisions, using field screening methods whenever possible.</li> <li>Track site assessment work in CERCLIS to ensure reassessments are not performed unnecessarily on the same site.</li> <li>Ensure site assessment data in CERCLIS is accurate and complete.</li> <li>Minimize the time needed to get to final assessment decisions.</li> <li>Work closely with the RCRA program to communicate decisions on site deferrals/referrals.</li> <li>Evaluation: Region will include an evaluation method and schedule for this strategy before the Plan is finalized.</li> </ol>
Maximize the number of cleanups initiated, and clean up sites faster and more cost-effectively.	Use the NPL as leverage to encourage PRPs to perform cleanups via state and tribal programs and the SAS sites process.
Measures: 1. Percentage of NPL and NPL-eligible sites where response has been initiated. 2. Percentage of NPL and NPL eligible sites	Evaluation: Region will include an evaluation method and schedule for this strategy before the Plan is finalized.
2. Percentage of NPL and NPL-eligible sites	IIIIaIIZU.

II - 3 - 9 01/15/2004

Outcomes/Desired Results	Regional Strategies
where PRPs perform or pay for cleanup.	
3. Percentage of NPL-eligible sites which are cleaned up through the SAS process.	
Superfund Final Remedy Selected/ Current Human Exposures Under Control/Ground Water Migration Under Control/Cleanup Completed:	1. Encourage accelerated investigation techniques, presumptive remedies, fast-track settlement negotiations, and expedited construction schedules at all NPL sites.
Eliminate or control human health and environmental risks from NPL and SAS sites.  Measures:  1. Number of Superfund hazardous waste sites with human exposures controlled. (GPRA measure)  2. Number of Superfund hazardous waste sites with ground water migration controlled. (GPRA measure)  3. Percentage of sites deleted from the NPL.	<ol> <li>Ensure final remedies—designed to clean up contamination to risk levels protective of human health and the environment, and providing for reasonably anticipated land use—have been selected at NPL and SAS Superfund sites.</li> <li>Secure state 10% cost share at fund-lead RA sites.</li> <li>Achieve risk-based cleanup goals at NPL and SAS sites.</li> <li>Establish necessary engineering and institutional controls to appropriately limit human exposure at NPL and SAS sites.</li> <li>Evaluation: Region will include an evaluation method and schedule for this strategy before the Plan is</li> </ol>
Current Human Exposure to Toxins and Toxic Releases to Ground Water Under Control:  1. Human exposure to toxins and toxic releases to groundwater are under control at RCRA GPRA sites.  2. Cleanups are completed at RCRA corrective action (CA) sites.  Measures: 1. Number of RCRA sites at which human exposures are under control.  2. Number of RCRA sites at which toxic releases to ground water are under control.	finalized.  Through 2008, WPTD will work collaboratively with all of its partners, including industry, to reduce risk to human health and the environment from RCRA sites.  Evaluation: Region will include an evaluation method and schedule for this strategy before the Plan is finalized.

II - 3 - 10 01/15/2004

Outcomes/Desired Results	Regional Strategies
LUST Site Cleanups:  Cleanups are initiated and completed at LUST sites.	Through 2008, WPTD will work collaboratively with the states to reduce risk to human health and the environment at LUST sites and reduce the LUST backlog by 50% in 2008.
Measures: 1. Cleanup and reduction of the backlog of UST sites by 50%.	Evaluation: Region will include an evaluation method and schedule for this strategy before the Plan is finalized.
Make Land Available for Reuse:  Formerly contaminated NPL, SAS, and federal-lead RCRA CA sites are returned to productive use.  Measures:  1. Number of acres of land ready for reuse at NPL and SAS sites (including those that are actually in reuse). (GPRA measure)  2. Number of Superfund sites or portions of sites that are ready for reuse (including those that are actually in reuse). (GPRA measure)  3. Percentage of NPL and SAS sites that are ready for reuse.  4. Number of acres of land ready for reuse at federal-lead RCRA CA sites.	<ol> <li>Issue Superfund Redevelopment Initiative grants and other assistance to communities to fund redevelopment projects.</li> <li>Distribute fact sheets that clearly and visually communicate the environmental safety and reuse potential of remediated properties.</li> <li>Make Ready for Reuse determinations.</li> <li>Respond to all requests to assist with the transfer of federal properties for reuse or redevelopment.</li> <li>WPTD will develop a strategy which factors and institutionalizes reuse/revitalization into remedy decisions.</li> <li>Evaluation:         <ul> <li>In FY2005, the SFD will conduct an evaluation to determine if issuing grants and distributing fact sheets has increased the number of acres ready for reuse compared to before the revitalization program began.</li> </ul> </li> </ol>
Subobjective 3.2.3 Maximize Potentially Responsible Party Participation at Superfund Sites:	1. Under the national Enforcement First strategy, evaluate sites to determine if they have viable, liable PRPs.
All liable and viable PRPs pay for or perform cleanups at Superfund sites.  Measures:  1. Percentage of removal sites with a viable, liable PRP which had a settlement, enforcement action, or voluntary cleanup.  2. Percentage of NPL and SAS sites with a	<ul> <li>2. Reach a settlement or take an enforcement action</li> <li>a) by the time of the remedial action start at 90% of NPL sites with known non-federal, viable, liable PRPs,</li> <li>b) at at least 30% of removal sites, and</li> <li>c) at 100% of SAS sites.</li> <li>3. Address 100% of statute of limitations (SOLs)</li> </ul>

II - 3 - 11 01/15/2004

Outcomes/Desired Results	Regional Strategies
viable, liable PRP which had a settlement, enforcement action, or voluntary cleanup.	cases with unaddressed total past costs equal to or greater than \$200,000.
	4. Ensure Trust Fund receives all amounts due from PRPs.
	Evaluation: Region will include an evaluation method and schedule for this strategy before the Plan is finalized.

II - 3 - 12 01/15/2004

# **Goal 4 -** Healthy Communities and Ecosystems

Protect, sustain or restore the health of people, communities, and ecosystems using integrated and comprehensive approaches and partnerships

**Objective 4.1: Chemical, Organism, and Pesticide Risks.** Prevent and reduce pesticide, chemical, and genetically engineered biological organism risks to humans, communities, and ecosystems.

A. What is the current state of human health or environmental protection for this objective in the region and are there any relevant trends over time (i.e., what indicators or data specific to this objective characterize the current status and trends as context for the region's strategy)?

**Worker Safety - Pesticides** - Region 5 continues to work with EPA OPP to review the state submitted revised Certification and Training Plans and provide comments to the states for improvement.

**Pesticides & Water Quality** - Region 5 continues to work with states on water quality issues in anticipation of a final Pesticide Management Plan (PMP) rule. The Region continues to encourage projects/activities intended to support the state PMPs and will assure timely and effective completion of these tasks. The Region 5 Pesticide Section Staff is working with Region 5 Water Division staff to assess the impact of the Atrazine Interim Reregistration Eligibility Decision (IRED) on Community Water Systems in Region 5.

Strategic Agriculture Initiative - Region 5 has placed an emphasis on communicating Food Quality Protection Act (FQPA) related regulatory decisions and their potential impacts to the agricultural community, and in facilitating the transition to reduced-risk alternatives in response to those impacts. Using Strategic Agricultural Initiative funds, Region 5 project partners are assessing growers' educational and research needs, and developing tools to enhance the adoption of integrated pest management (IPM).

**PCB Program** - Region 5 is developing MOAs with Wisconsin DNR and Michigan DEQ to utilize state decision making authority for the proper management of PCB waste. The MOAs will be used in combination with TSCA coordinated approvals. This approach will expedite the remediation and disposal of PCBs in these states and, consistent with the One Cleanup Program, may be used to remediate and dispose of PCBs under other programs, such as Superfund, RCRA, Brownfields, and solid waste.

**Lead Program** - The number of elevated blood-lead (EBL) cases region wide had dropped from 50,278 in 1999 to 39,659 in 2001, a 21% reduction over a two year period. During that same period, the rate of children showing EBL declined from 9% to 6.4% even though the number and percentage of children being tested both increased.

**Children's Health** - Region 5 is working collaboratively with govt. and non-govt. parties to improve children's health primarily in homes and at school. Reducing blood lead levels in children who live in urban areas continues to be a focus for Region 5 as well as developing Environmental Management Strategies for schools to address lead, integrated pest management, waste minimization and hazardous chemical management and disposal.

II - 4 - 1 01/15/2004

**PBT Strategy** - Region 5 has started a new strategy, targeted to reduce emissions of lead and naphthalene over a two-year period. TSCA, FIFRA, EPCRA/TRI and P2 staff work closely with RCRA staff and involve the state waste management programs, as well. Region 5 is the OSW "champion" region for PBTs and plans to implement this strategy under the aegis of the new Resource Conservation Challenge.

**Toxic Release Inventory** - Using information from the Office of Solid Waste's Waste Minimization Trends Report, Toxic Release Inventory reports, permit renewal applications, inspection reports, and research about industry, WPTD identifies a set of pollution prevention opportunities and engages facilities to address them.

Chemical Emergency Prevention and Preparedness - OCEPP estimates that 85% of the covered facilities have submitted an RMP and that 50% of Regional LEPCs have developed a paln to address chemical accidents. However, our interactions with facilities and LEPCs leads us to believe that less than 5% have internalized a chemical management/accident prevention ethic.

B. What are the major problems in the region that need to be addressed in order to make progress toward the strategic objective?

**Pesticides & Water Quality** - Barriers to the success of addressing pesticides and water quality issues include overlapping authorities and programs. The overlapping authorities are the Federal Insecticide Fungicide and Rodenticide Act, the Food Quality Protection Act, the Safe Drinking Water Act, and the Clean Water Act. Overlapping programs are the Pesticides Program, the Water Program and the Headquarters administered responsibilities under the Endangered Species Act. Competing program interests and authorities may hinder progress.

Strategic Agriculture Initiative - Barriers to the success of the Strategic Agricultural Initiative include the perception among many in the agricultural sector that this initiative exclusively pertains to the regulatory agencies. A paradigm shift needs to occur among the stakeholders that the regulatory agencies can serve as a partner in these voluntary Strategic Agricultural Initiatives.

*Toxic Release Inventory* - The general public and other stakeholders may not know how to access or understand the information contained within the Toxic Release Inventory database.

**Chemical Emergency Prevention and Preparedness** - The OCEPP program receives excellent support from Regional management, the primary obstacle that needs to be addressed is the lack of sufficient resources both in terms of dollars and FTE allocated to it on the National level.

II - 4 - 2 01/15/2004

Outcomes/Desired Results	Regional Strategies
Subobjective 4.1.1: Reduce Exposure to Toxic Pesticides.	
Pesticides & Water Quality Reduce the amount of pesticides in the waters of the Region.	> Through 2008, Region 5 will coordinate on issues where pesticides and water programs have a mutual interest. The Region will help facilitate all levels of government to work toward solutions to problems arising out of overlapping or conflicting authorities and programs or arising out of the lack of authority or programs to address the issue. WPTD will provide assistance on 1) adverse effects from currently registered pesticides on ground water and surface water, 2) processes needed to avoid and mitigate adverse effects from currently registered pesticides, and 3) attaining coordination at the state level among the agencies with water responsibilities. > Region 5 Pesticides and Water Programs will work cooperatively to address pesticides and water quality issues associated with source water protection plans, TMDL development, resource conservation efforts, etc. > Region will work with national program to develop a regional evaluation plan.
Strategic Agriculture Initiative: Reduced use of high risk pesticides in the Region.	> Through 2008, Region 5 will develop pest management strategies with growers not otherwise reached by USDA and EPA HQ. The strategies will identify alternatives to harmful pesticides and assist targeted groups in producing safe food. Implement model agricultural partnership projects that demonstrate and facilitate the adoption of farm management practices that transition growers away from highest risk pesticides.  > Region will work with national program to develop a regional evaluation plan.
Subobjective 4.1.2: License Pesticides Meeting Safety Standards.	
Worker Safety-Pesticides: Improve pesticide worker safety.	<ul> <li>Through 2008, strengthen pesticides worker protection, certification and training by providing States and State designated agents with appropriate training, guidance, and resources to successfully implement pesticide worker safety programs.</li> <li>EPA Region 5 will encourage states to implement CTAG recommendations and become involved in this national assessment.</li> <li>EPA Region 5 will also encourage cooperation and partnering between state pesticide agencies and pesticide safety educators at not only the state level, but the regional level as well.</li> <li>Region will work with national program to develop a regional</li> </ul>

II - 4 - 3 01/15/2004

Outcomes/Desired Results	Regional Strategies
	evaluation plan.
Subojective 4.1.3: Reduce Chemical and Biological Risks.	
PCB Program: Reduce the number of pieces of PCB electrical equipment in use.	> Through 2008, Region 5 will continue its efforts under the Region 5 PCB Phase out Program, the Persistent Bioaccumulative Toxics Initiative and the Binational Strategy.
	<ul> <li>Through 2008, Region 5 will seek the early voluntary retirement of PCB equipment.</li> <li>Region will work with national program to develop a regional evaluation plan.</li> </ul>
Lead Program: Through 2008, significantly reduce childhood lead poisoning through reducing environmental lead exposure and by addressing its manifold sources.	<ul> <li>Through 2008, WPTD will provide oversight of State and Tribal accreditation and certification programs for lead based paint as well as conduct education awareness and outreach.</li> <li>Through 2008, WPTD will award and provide oversight for Tribal set aside lead grants for implementation of blood level screening and lead awareness activities.</li> <li>Region will work with national program to develop a regional evaluation plan.</li> </ul>
Aging Populations: Strategic outcomes are being developed nationally through the National Agenda for the Environment and the Aging, which is currently being shaped through an open participatory process.	> EPA recently launched an Aging Initiative designed to study and prioritize the environmental health risks older Americans face. As part of that initiative, EPA is in the process of creating a National Agenda for the Environment and the Aging. The National Agenda will be composed of three parts: (1) Identifying research gaps in environmental health; (2) Preparing for an aging society; and (3) Encouraging older adults to volunteer to address environmental hazards. This agenda will help identify research gaps and develop strategies that will help us better understand the environmental hazards effecting the health of older Americans. Region 5 will assist in the development and implementation of this National Agenda for the Environment and the Aging.  > Region will work with national program to develop a regional evaluation plan.
Children's Health: By 2008, a significant number of children in Region 5 will attend schools that have healthier environments including reduced exposures to poor indoor air quality, asbestos, mercury, pesticides and other hazardous	> Through 2008, WPTD will provide technical assistance to K-12 schools/districts on school environmental health issues such as integrated pest management, waste minimization, hazardous chemical management and disposal for laboratory and facility chemicals. WPTD will encourage voluntary school "greening" to improve school environmental health. > Region will work with national program to develop a regional evaluation plan.

II - 4 - 4 01/15/2004

Outcomes/Desired Results	Regional Strategies
chemicals.  Measure(s): By 2008, 5% of school districts within Region 5 will adopt an Environmental Management Systems approach to school environmental health.	
PBT Strategy: Reduction in the release or exposure to priority persistent bioaccumulative toxic (PBT) chemicals (mercury, PCBs, dioxins/furans, lead, naphthalene, polycyclic hydrocarbons) in wildlife and humans.  Measure(s): Region will reduce the volume of lead, naphthalene and polycyclic hydrocarbons generated by 50% by 2008.	<ul> <li>Through 2008, WPTD will identify and foster participation across the Regional programs and offices in supporting projects that reduce exposures to PBT chemicals. WPTD will also identify emerging issues related to these chemicals as well as seek solutions by partnering with all Regional programs. WPTD will also affect the development of national and Regional policies addressing PBT chemicals.</li> <li>Region will work with national program to develop a regional evaluation plan.</li> </ul>
Toxic Release Inventory: A Toxic Release Inventory (TRI) which is accurate and accessible to the general public and regulators.	> Through 2008, WPTD will increase awareness of the information contained within the TRI data base to the general public and the accuracy provided by the entities it regulates. > Region will work with national program to develop a regional evaluation plan.
Subobjective 4.1.4: Reduce Risks at Facilities.	
<ol> <li>By 2008 50% of the Region's agricultural cooperatives will have developed and internalized a chemical management safety ethic.</li> <li>By 2008 50% of the Region's water and waste water treatment facilities will have developed and internalized a chemical management safety ethic.</li> </ol>	<ul> <li>Outreach/training either independent of or in conjunction with partners</li> <li>Provide compliance assistance as part of RMP audits/inspections</li> <li>Sponsor joint LEPC/industry exercises of emergency plans</li> <li>Develop and/or contribute to publications, newsletters, fact sheets to reinforce message</li> <li>Leverage existing inspection efforts of State Departments of Agriculture and fire departments</li> <li>Targeted administrative enforcement actions</li> <li>Review and comment on water facility SVA</li> </ul>

II - 4 - 5 01/15/2004

Outcomes/Desired Results	Regional Strategies
3. By 2008 50% of the Region's urban LEPC's will have incorporated facility risk information into their emergency preparedness and community-right-to-know programs.	> Develop partnership with SERCs to: -identify industrialized urban areas of concernconduct joint training/outreach to LEPCs -ensure facilities are providing inventory/facility data to LEPCs that is necessary for planning to promote the use of computer base GIS software to assist in LEPC planning process to promote the use of RMP data by LEPCs in their planning process

**Objective 4.2: Communities.** Sustain, cleanup and restore communities and the ecological systems that support them.

A. What is the current state of human health or environmental protection for this objective in the region and are there any relevant trends over time (i.e., what indicators or data specific to this objective characterize the current status and trends as context for the region's strategy)?

Community Health (Urban Initiative/Great Cities) - The Midwest abundance of natural resources and ease of access by major waterways and overland trails attracted settlers who built centers of commerce, trade, transportation, and agriculture. These urban centers experienced economic prosperity, population growth and industrial expansion which brought environmental consequences and the complex issues of jurisdiction and governance. Now urban areas are mature and coping with depressed economic conditions, a world market that lures businesses to other locations, aging infrastructures, growing and changing populations, decreasing revenues, and increasing demand for social services. They are also homes to unique and special ecosystems. Urban areas present complex environmental problems which would benefit from innovative approaches.

Environmental Justice - Many predominantly low-income and minority communities (both in urban and rural areas) continue to experience significant adverse environmental impacts. Members of these communities repeatedly express concerns that these impacts fall disproportionately on them, and are directly harming their health and environment, as well as lowering their overall quality of life. They also question whether EPA is making sufficient use of existing legal authorities to identify and respond to these concerns. Region 5's main strategies in response to these concerns are now aligned with the "Objectives" set out in Office of Environmental Justice's instructions for development and submission of program- and Region-specific Environmental Justice Action Plans for FY 2004-2005.

**Brownfields** - Significant public sector redevelopment resources exist within an extensive network of state, tribal and local governmental programs. Many programs target the broadest range of deserving and needy communities. Yet the sum total of these funds is only a small portion of what is truly needed for the Region's urban and abandoned industrial areas. Region 5 easily contains 20–25% of the nation's brownfield inventory, which is estimated to be over 450,000 properties. Coordination of existing redevelopment resources toward those properties where development will only occur with public sector involvement is essential in order to maximize urban redevelopment efforts across the Region. Recognition that these are high risk real estate transactions is essential to future success.

II - 4 - 6 01/15/2004

B. What are the major problems in the region that need to be addressed in order to make progress toward the strategic objective?

Community Health (Urban Initiative/Great Cities) - Urban areas major environmental problems include public health, ecosystem, economic redevelopment issues such as air pollution, poor water quality, contaminated soils and sediments, and lead poisoning, loss of wetland, and brownfields.

#### Environmental Justice -

- Inconsistent incorporation of EJ into our Regional policies and programs.
- Difficulty in determining if our EJ efforts result in measurable improvements in the environment and human health of low-income and minority communities.
- Difficulty in implementing EJ practices and addressing EJ concerns in a time of "shrinking resources."
- Getting Region 5 States and other relevant stakeholders without EJ programs/policies to develop a comprehensive EJ program/policy.
- No system in place to track regional EJ cases/projects and monitor their progress.
- Lack of qualitative or quantitative assessment of the overall environmental and human health of low-income and minority communities in Region 5.
- Lack of a clear national definition of "disproportionate impacts" or a methodology to assess cumulative risks.

**Brownfields:** The central problems or obstacles to be overcome are a lack of coordination and synchronizing of grant cycles and a lack of communication among the funding agencies. For projects where public sector resources are going to form the basis of all redevelopment funding it is imperative that all funds be leveraged for maximum impact. Community need must be balanced by the redevelopment potential of any project and vise versa. Planning and project feasibility funding can be spread fairly thin over many communities and still have a positive impact. Cleanup and other construction funding on the other hand must be targeted to fewer projects, with a nexus of resources and with a higher potential for success.

Outcomes/Desired Results	Regional Strategies
Subobjective 4.2.1: Sustain Community Health.	
<u>Urban Initiative</u> :	
To produce measurable	The Region 5 Urban Initiative will address complex
environmental results through the	environmental problems presented by urban areas which, whether
reduction of contaminant releases	single or multi-media in nature, benefit from an innovative
to the environment thus helping	approach under the management of dedicated staff. The Region
to create robust and sustainable	will focus on action, not analysis; using individual projects to get
urban economies; and healthier	to results, seeking comprehensive, community supported
human populations and	solutions, bring th full rang of EPA regulatory and voluntary tools

II - 4 - 7 01/15/2004

#### and expertise to bear on the problems, and leveraging resources ecosystems. *Measure(s):* from across the agency as well a with other federal, state, local, XX% reduction in pounds of air and private partners; and building on existing capacity in groups and institutions wherever possible. Urban initiative managers are toxics. XX of sites or acres available for redevelopment, charged with working with the Region's divisions and offices and miles of rivers that have had states to identify priority problems and places which would sediment remediation, % benefit from a team approach that will provide a holistic reduction in lead poisoning, XX perspective. The urban initiative activities will focus on discrete of homes abated for lead, XX and projects for which a workplan with associated goals, objectives, identified resources, and a schedule and timeline will be kinds of voluntary programs implemented that will reduce developed. A team of Region 5, State and local stakeholders will pounds of pollutants and jointly implement the workplan. promote pollution prevention and sustainable activities. Since WPTD will, through 2008, reduce contaminated land in NW much of this work is Indiana through land remediation, restoration, and re-use. accomplished through partnerships, measures early in the process may describe agreements to identify and develop strategies to address environmental problems. *Great Cities Partnerships:* The Urban Initiative Mangers will seek out specific To produce measurable environmental projects within their respective cities and will then environmental results from the assist in implementation and project management of recommended projects. Projects will be funded with existing RGI projects identified as an environmental priority by the money and will, if applicable, enlist programmatic support to Mayor of each city of the Great enhance the proposed project. City Partnerships. The Great In addition to these six Great Cities projects, the UIMs will Cities are: Chicago, Detroit, assist in implementing, coordinating and facilitating specific program projects in each Great City. For example: Minneapolis, Milwaukee, and Indianapolis. **Detroit** \* Detroit River Flyway Initiative \*SEMI Environmental Forum \*Detroit Lead Partnership Chicago \*Chicago River Workgroup/Chicago Area Rivers Remediation Initiative \*Chicago Lead Strategy \*Air Toxics Reductions through Pollution Prevention and Environmental Management Systems (Chicago) \*Ford Good Neighbor Dialogue (Chicago) \*Sustainable Development Activities in Southeast Chicago Cleveland

Regional Strategies

**Outcomes/Desired Results** 

II - 4 - 8 01/15/2004

Outcomes/Desired Results	Regional Strategies
	*Cleveland Clean Air Campaign *Cleveland's One-Stop Brownfields *Cleveland's Greenway project  Milwaukee (To be determined)  Minneapolis *Urban tree planting initiative  Indianapolis (To be determined)
Subobjective 4.2.2: Restore Community Health	
Environmental Justice: To integrate environmental justice into all EPA programs, policies, and activities that results in a measurable benefit to the environment and public health of affected communities.  Measure(s): Successful implementation of the Region 5 FY2004-2005 EJ Action Plan and all subsequent Action Plans as required by the Office of Environmental Justice in EPA Hqs. Measures for each strategy are set out in the Action Plan.	Implement our Region 5 EJ Action Plan which describes our efforts in the following objective areas:  1. Risk Reduction / Protect Environmental and/or Public Health - To ensure equal implementation of environmental laws to achieve significant risk reduction which will improve the environment and/or public health of affected communities. Activities include: community-scale air toxics assessment; enforcement targeting; draft permit review; addressing fish contamination; and considering EJ in NEPA review.  2. Outreach and Communication - To provide opportunities for meaningful involvement and ensure effective communication between the Agency decisionmakers and stakeholders, including all affected communities. Activities include: updated EJ information available on Region 5 website; outreach to concerned groups; tracking of cases where EJ is raised to ensure follow-up.  3. Training - To provide training for EPA managers and staff to enable them to incorporate environmental justice considerations into their decisionmaking process. Activities include: providing general training on EJ, as well as training in specific areas (in coordination with OEJ).  4. Federal, State, Tribal, and Local Government Coordination - To ensure effective coordination across all levels of government to address the environmental and public health concerns of affected communities. Activities include: work with state permit programs in ensure consideration of EJ issues; convene information-exchange meetings.  5. Grants and Contracts Administration - To promote effective and efficient management of all grants and contracts to ensure that the environmental and public health concerns of affected communities are addressed. Activities include: updating Grant Writing Tutorial; integrating EJ criteria in Great Lakes funding guidance.  6. Environmental Justice Assessment - To conduct n assessment

II - 4 - 9 01/15/2004

Outcomes/Desired Results	Regional Strategies
	of the environmental justice indicators within affected communities as part of the decision-making process. Activities include: finalizing Region 5's Interim EJ Guidelines for EJ Assessment; better integrating assessment into permitting actions.
Subobjective 4.2.3: Assess and Clean Up Brownfields.	
<ol> <li>State and federal programs targeting increased numbers of same-community projects, maximizing financial effectiveness.</li> <li>Reduced number of strategic projects go unfunded.</li> <li>New funding sources to neediest communities and Tribes.</li> <li>National base program targets met.</li> </ol>	<ol> <li>Leverage existing environmental and economic redevelopment programs.</li> <li>Encourage adaptive reuse of infrastructure and the creation of open space.</li> <li>WPTD will, by 2004, develop a RCRA Brownfields Strategy for the Region which further defines WPTD's role.</li> </ol>
2. Meth Lab Project initiated in at least one state.	
3. Increased numbers of park land and open space created within existing Regional brownfield inventories.	Encourage adaptive reuse of infrastructure and the creation of open space.

## **Objective 4.3: Ecosystems.** Protect, sustain and restore the health of natural habitats and ecosystems.

A. What is the current state of human health or environmental protection for this objective in the region and are there any relevant trends over time (i.e., what indicators or data specific to this objective characterize the current status and trends as context for the region's strategy)?

Wetlands - Trends indicate that wetland acreage is declining. A change in the definition of waters of the U.S. could also lead to a loss of the wetlands, which area significant natural resource in Region 5. The Illinois Natural History Survey estimated that 150,118 acres of wetland are at risk if "isolated" wetlands are no longer regulated. The Indiana Department of Environmental Management estimated that as many as 315,235 acres of "isolated" wetlands could be lost. Because of the downward trend and the uncertainty over the definition of waters of the US, it is critical that we have accurate information on wetland quantity and quality and work to increase acreage through mitigation and other efforts.

*Great Lakes* - The Great Lakes are the largest system of surface freshwater on earth, containing 20% of the world's surface freshwater resource and accounting for more than 90% of the surface

II - 4 - 10 01/15/2004

freshwater in the US. The watershed includes two nations, eight US States, a Canadian Province, and more than forty Tribes and is home to more than one-tenth of the US population. The 2001 State of the Lakes Ecosystem Conference Report assessed the status of the chemical, physical, and biological integrity of the waters of the Great Lakes basin ecosystem as mixed because:

- Surface waters are still amongst the best sources of drinking water in the world;
- Progress has been made both in cleaning up contaminants and in rehabilitating some fish and wildlife species;
- Invasive species continue as a significant threat to Great Lakes biological communities;
- Atmospheric deposition of contaminants from distant sources outside the basin confound efforts to eliminate these substances;
- Urban sprawl threatens high quality natural areas, rare species, farmland and open space; and
- Development, drainage, and pollution are shrinking coastal wetlands.

For the Agency Strategy, GLNPO was asked by HQ to propose a single measurable Great Lakes subobjective for which progress could be quantified by 2008. We proposed an index based upon the work done with partners through the State of the Lakes Ecosystem Conferences, using and interpreting select indicators (i.e., coastal wetlands, phosphorus concentrations, AOC sediment contamination, benthic health, fish tissue contamination, beach closures, drinking water quality, and air toxics deposition). The 2002 baseline was 20 on a 40 point scale, based on a 1 to 5 rating system for each indicator, where 1 is poor and 5 is good.

*Gulf of Mexico* - Nutrient loadings from throughout the Mississippi River Basin, including a large portion of Region 5, are believed to be the principle cause of the expansion and increasing persistence of a hypoxic zone in the Gulf of Mexico.

B. What are the major problems in the region that need to be addressed in order to make progress toward the strategic objective?

**Wetlands** - Problems include: limited authority to prevent wetland loss; the SWANCC Decision limits the scope of jurisdictional wetlands; and the ability to measure real environmental improvement to wetlands (lack of baseline data and monitoring approach)

*Great Lakes* - The major problems in the region that need to be addressed in order to make progress toward the strategic objective are: Air toxics deposition, contaminated sediments, invasive species, and loss of wetlands.

Note that none of the 28 estuaries identified in the Coastal Conditions Report cited in Sub-objective 4.3.1 are located in Region 5.

II - 4 - 11 01/15/2004

Outcomes/Desired Results	Regional Strategies
Subobjective 4.3.2: Increase Wetlands	
Wetlands and Watersheds:  1. A current and accurate baseline of wetland data is completed and maintained.  Measure(s):  The baseline of wetland data is useful to developers and regulators in protecting and restoring wetland resources.	> Work in partnership with others to create a current baseline of wetland data.  1a. Wetland Consortium  1b. GIS wetland baseline mapping  1c. MNRG Wetland tracking  1d. National wetland assessment guideline  1e. Wetland Monitoring Programs  Evaluation:  At end of the reporting period, we will evaluate the coverage, scale, and usefulness of the tracking efforts to all partners.
2. Protection and restoration of critical habitat, including wetlands, on Tribal lands. <i>Measure(s):</i> Critical habitat on Tribal lands is protected and restored.`	> Work with Tribes to develop and implement Wetland Conservation Plans that allow them to identify, protect and restore critical habitat. <b>Evaluation:</b> We will work with the Tribes to evaluate the effectiveness of the Wetland Conservation Plans as they are implemented.
<ol> <li>Consistent jurisdictional determinations.</li> <li>Measure(s):</li> <li>Jurisdictional determinations are consistent among agencies.</li> </ol>	> Work with COE and States on wetland jurisdiction protocols.
4. Building capacity of State and Tribal wetlands programs.  *Measure(s):* States and Tribes have the capacity to implement the core elements of an effective wetlands program.	> Work with States/Tribes to enhance State or local authority over wetlands.
5. A public educated on the benefits and importance of wetlands.  Measure(s): Increased public support for wetlands protection.	> Sponsor conferences, provide training, develop and distribute written materials.
6. Increased wetland quality and quantity.	<ul> <li>Leverage EPA programs and partner with other agencies to increase wetland acreage and quality.</li> <li>Carry out enforcement and provide compliance assistance.</li> <li>Target actions to Regional geographic focus areas</li> </ul>

II - 4 - 12 01/15/2004

Outcomes/Desired Results	Regional Strategies
7. Successful wetlands mitigation.  *Measure(s):  Acres of wetlands saved or gained due to restoration, mitigation, and enhancement.	Evaluation: We will evaluate whether enforcement actions and compliance assistance resulted in wetland gains, especially in targeted geographic areas.  > Promote mitigation in our review of and comments on COE Public Notices > Oversee mitigation/restoration resulting from the resolution of enforcement actions. > Mitigation requirement oversight in partnership. Evaluation: Mitigation followup occurs on a consistent basis resulting in successful wetlands.
Subobjective 4. 3.3: Improve the Health of Great Lakes Ecosystems.	
1. By 2008, prevent water pollution and protect aquatic systems of the Great Lakes so that the overall ecosystem health of the Great Lakes is improved by at least 2 points.  *Measure(s):  The overall ecosystem health of the Great Lakes is improved by at least 2 points. (2002 Baseline: Great Lakes rating of 20 on a 40 point scale where the rating uses select Great Lakes State of the Lakes Ecosystem indicators (i.e., coastal wetlands, phosphorus concentrations, AOC sediment contamination, beach closures, drinking water quality, and air toxics deposition), based on a 1 to 5 rating system for each indicator, where 1 is poor and 5 is good.  2. PCB concentrations in fish decline by 25% (2000 to 2007).  3. Delist 3 AOCs by 2005 and 10 by 2010.  4. By 2006, create 10 voluntary partnerships with sources of persistent toxics.  5. By 2006, all NPDES permitted discharges will have permit limits that reflect the Guidance's water quality standards, where applicable.  6. Beginning in 2004, complete three sediment remedial actions per year.  7. By 2005, 100% of all CSO permits in the Great Lakes basin will be consistent with the	<ul> <li>Work with State, Tribal, and Federal partners to implement the Great Lakes Strategy.</li> <li>Tools and methods will include: <ol> <li>GL Strategy</li> <li>GL Binational Toxics Strategy</li> <li>GL Legacy Act</li> <li>LaMPs</li> <li>RAPs</li> <li>GLNPO and GL Strategy Partners: EPA Base programs (Air, Water, Waste); State/Tribal Env. and Natural Resource Agencies; Federal Agencies (ATSDR, NOAA, USACE, Coast Guard, Ag agencies - NRCS, CREES, and FSA, USFWS, USFS, NPS, and USGS; GL Fishery Commission; and Canadian partners</li> </ol> </li> <li>Evaluation: <ul> <li>Annual Progress Review with US Policy</li> <li>Committee</li> <li>Fall - Request Updates</li> <li>Feb - Updates due</li> <li>Spring - Report on Progress</li> </ul> </li> </ul>

II - 4 - 13 01/15/2004

Outcomes/Desired Results	Regional Strategies
national CSO Policy.  8. By April 2004, all Great Lakes States will adopt bacteria criteria at least as protective as USEPA's Ambient Water Quality Criteria for Bacteria.  9. By 2005, water quality monitoring and public notification programs will comply w/ National Beaches Guidance at 95% of all high priority GL beaches.	
Subobjective 4.3.5: Gulf of Mexico.	
Prevent water pollution and protect aquatic systems in order to improve the overall health of the Gulf of Mexico.  Strategic Target IV-N (2): By 2015, reduce releases of nutrients throughout the Mississippi River Basin to reduce the size of the hypoxic zone in the Gulf of Mexico, to less than 5,000 km2 as measured by the five year running average of the size of the zone.	Region 5 strategies/milestones  - In cooperation with Region 7 by the end of 2004, facilitate the organization and operation of a state led sub-basin team  - Provide leadership to MNRG to facilitate interagency cooperation, so that by 200X the combined effect of point source regulatory programs, agricultural conservation programs and habitat restoration projects is to reduce nitrogen loading from the Illinois River basin by 30%.  - In cooperation with IEPA, MWRDGC and BNWRD, and TWI, demonstrate the effectiveness of nutrient farming to remove nitrogen from Illinois River waters by 2008 [?].  - In cooperation with OEPA, GMCD and ORSANCO, demonstrate a nutrient trading program in the Great Miami River watershed by 2006 [?].  - Provide technical assistance and resources to States so that by 2008 all have adopted nutrient criteria for fresh waters.

**Objective 4.4: Enhance Science and Research.** Through 2008, provide a sound scientific foundation for EPA's goal of protecting, sustaining, and restoring the health of people, communities, and ecosystems by conducting leading-edge research and developing a better understanding and characterization of environmental outcomes under Goal 4.

A. What is the current state of human health or environmental protection for this objective in the region and are there any relevant trends over time (i.e., what indicators or data specific to this objective characterize the current status and trends as context for the region's strategy)?

II - 4 - 14 01/15/2004

*Ecosystem Protection Approach*- A number of regional offices have developed ecosystem assessment models that either identify high quality areas for protection or some other method of determining current ecological health within their Regions. These Regional Offices, as well as interested Headquarters offices and ORD, have developed a Regional Ecosystems Protection Strategy (REPS) that will create effective initiatives and strategies within the core functions of EPA to facilitate the protection and restoration of ecosystems which are critical to biodiversity, human health and/or landscape functions.

*Environmental Indicators* - We have not fully used environmental and human health indicators to influence our strategic decisions and demonstrate the results of our protecting the Environment. We have used shorter term activity records. How best to use indicators (and which ones) is a new area that EPA is exploring. The Agency is working at a national level with state and other federal Agencies to establish core representative indicators.

Human Health - The relationship between human health data and environmental data is not fully understood. Except for lead, there is no environmental contaminant where the linkage between human health and environmental conditions is fully understood. Our human health risk assessments are models that link human health and environmental conditions, however, they require the use of many assumptions. Understanding human health as it relates to environmental conditions is a daunting task. There are approximately 70,000 chemicals in production, many with by-products and metabolites.

**Science Coordination and Communication** - Currently, the Region does a reasonable job of communicating research needs and science policy among regional programs. Improved communication with the Region 5 states regarding their research needs and current science policy is needed.

Community Water Systems - The EPA Water Protection Task Force estimates that 99% of the large (serving 100,000 or more people) Community Water Systems (CWSs) have completed and submitted Vulnerability Assessments (VAs) and VA Certifications to EPA Headquarters and are in the process of preparing/updating Emergency Response Plans (ERPs) incorporating the VA results. All large CWSs in Region 5 have completed and submitted a VA and VA Certification. Medium size CWSs (serving 50,000 - 99,999 people) and small CWSs (serving 3,301 - 49,999 people) are in the process of preparing their VAs. The due dates for submittal to EPA Headquarters are December 31, 2003 for the medium sized systems and June 30, 2004 for the small systems.

B. What are the major problems in the region that need to be addressed in order to make progress toward the strategic objective?

### Ecosystem Approach:

i) Geo-Spatial Tools - The Critical Ecosystems Team's model of ecosystem health is now going through peer-review and validation. This model, as well as others developed by different Regional Offices will be the basis of using sound science to better understand and improve ecosystem health.

II - 4 - 15 01/15/2004

ii) Environmental Indicators - The Region does not have a clear set of specific environmental indicators for ecosystem protection to help drive decision-making. A good set of indicators and tracking them is key for our mission, for clear decision-making and informing budgetary decisions. The Agency is working at a national level with the Science Advisory Board, state and other federal Agencies to establish core environmental indicators, and Region 5 is assisting in this effort.

**Environmental Indicators** - The Region does not have a set of environmental indicators specific to Region 5. These indicators should be identified and tracked over time to access our progress in environmental protection.

Human Health - In order for the Agency to best achieve its mission to protect human health and safe guard the natural environment we need to better understand the linkages between environmental hazards, ensuing human exposure, and potential health outcomes. With this information, we can better inform environmental and public health policies and decisions. Human health outcome information exists )often at the local) but it is often not comparable with the information available on environmental conditions. Generating comparable human health and environmental information is an important step to make progress toward this objective.

**Science Coordination and Communication** - Establishing and fostering a Region 5 State Science Council will improve communication between the Region and States on research needs and science policy.

**Community Water Systems** - The major problems that the Region faces in addressing this objective is lack of funding for implementation of security enhancements recommended as a result of the Vulnerability Assessment process.

Homeland Security - R5 Indoor Air Program continues to determine the scope of its responsibilities in the area of Homeland Security. It may find it necessary to re-define, with time, its role in supporting other programs and agencies in need of expertise on indoor air concerns, especially in educating building managers about protecting occupants. Beyond existing educational and support efforts dealing with prevention and recovery events, other interests may become evident as roles are further defined..

Outcomes/Desired Results	Regional Strategies
Subobjective 4.4.1: Apply the Best Available Science.	
Ecosystem Approach: Through 2008, identify and synthesize the best available scientific information, models, methods and analyses to support Agency guidance and policy decisions related to the health of people, communities, and ecosystems.	1. Use the results of the completed peer review and validation of R5 Critical Ecosystems Assessment Model as inputs to the REPS workgroup. (FY '04)  Evaluation: R5 CrEAM model is part of OPEI analysis of regional geo-spatial tools. Does R5 model provide a scientific basis for Agency geo-

II - 4 - 16 01/15/2004

#### Outcomes/Desired Results

## **Geo-Spatial Tools:**

In coordination with other federal agencies, EPA develops new geo-spatial tools and information that allows the Agency and its partners to assess ecosystem conditions holistically.

### **Measures:**

- 1. High quality ecosystems are identified and protected and/or restored as a result of Agency actions.
- 2. Useful indicators are developed that help EPA measure ecological improvements for both program work and for EPA's evolving *Report on the Environment*.

## **Environmental Indicators**:

Region 5 develops a regional scale Report on the Environment (ROE) that serves as a baseline for tracking environmental results. This Report reflects the National Report on the Environment.

#### Measure(s):

Each Region 5 program has assembled 2-5 environmental indicators that provide information about the state of the environment. The information is posted on the Region 5 intranet website.

HQ OEI is informed and supportive of the Region 5 ROE.

## Human Health:

- 1. Regional human health risk assessments are conducted in accordance with appropriate guidance.
- 2. The relationship between human health data and environmental data is assessed.

### *Measure(s):*

One or two states are developing data that measures the relationship between environmental conditions and human health outcomes.

### Regional Strategies

spatial tools?

2. Once CrEAM model has been peer reviewed and validated, place it on the Internet for R5 and external party use. (FY '05)

**Evaluation:** Does tool provide a value-added approach to EPA, State and NGO environmental protection strategies?

3. Develop and continue a training program to use geo-spatial tools in program work. (FY '04 - '05)

**Evaluation:** Does training class lead to more use of model and do program actions lead to a greater protection of critical ecosystems?

Each Region 5 program provides appropriate indicator information for the Region 5 ROE. OSEA provides facilitative, technical and analytical support in compiling and presenting these indicators. Quality of information is assured and appropriate for use. Region 5 communicates with OEI Office of Information Analysis and Access about development of Region 5 ROE.

### **Evaluation:**

Baseline information for Region 5 ROE is established and is reported on Region 5 intranet site. Straw of baseline information with most indicators is established by end of FY04.

1. The Region 5 Risk Policy Forum meets regularly, shares information, and discusses issues associated with conducting human health risk assessments.

#### **Evaluation:**

Region HHS consults with internal and external clients on risk assessments.

2. Region Human Health Scientist participates in implementing Memorandum of Understanding between EPA and HHS to for developing and linking environmental health information sources.

### **Evaluation:**

This is a long term effort, scheduled for completion in FY08. This is an effort to develop

II - 4 - 17 01/15/2004

Outcomes/Desired Results	Regional Strategies
	meaningful outcomes measures for measuring the human health impact of environmental conditions. Once the outcome measures are developed the effort will be fully successful.
Science Coordination and Communication: There is clear communication on science policy issues and research needs within the Region and with our states.  Measure(s):  1. Scientists and decision makers within Region 5 and in our states are informed of the process to submit research needs to ORD.  2. Scientists and decision makers within Region 5 and in our states are provided opportunities to provide research needs.  3. Scientists and decision makers within Region 5 and in our states are informed of key Science Policy issues and allowed to provide input where R5 or state activities are directly impacted.  4. Scientists and decision makers within Region 5 and in our states are informed of science implementation procedures such as Peer Review, Information Quality Guidelines and the process for updating the Agency Science Inventory database.	<ol> <li>The Regional Science Council (RSC) meets regularly to discuss and prioritize research needs for submittal to ORD.</li> <li>The RSC chair identifies qualified regional scientists (in some cases, they will be RSC members) to serve on the Regional Applied Research Effort review panel.</li> <li>The RSC chairman participates in Agency Science Policy Council Steering Committee meetings.</li> <li>The Region 5 Deputy Regional Administrator, RSC management advisor and the RSC Chair participate in Science Policy Council (SPC) meetings.</li> <li>RSC meeting agendas include time to provide updates on issues under consideration by the Agency Science Policy Council and the Science Policy Council Steering Committee.</li> <li>The RSC chairman organizes teleconference calls with members of the Region 5 State Science Council and provides updates on SPC science policy issues.</li> <li>The RSC hosts a meeting of State Science Council members and their respective managers to discuss and identify methods to improve science collaboration and science planning activities.</li> <li>Evaluation:         The RSC has a planning sub committee that will track these activities to achieve the desired outcomes.     </li> </ol>
Vulnerability Assessments for Community Water Systems:	Strategies to achieve this outcome:
All Community Water Systems prepare and submit a Vulnerability Assessment (VA) and VA Certification to Headquarters by the required due date:	> Provide direct technical assistance, as requested, to Community Water Systems (CWSs) on Bioterrorism Act requirements, including Vulnerability Assessments (VA) and Emergency Response Plans (ERP). > Provide training and technical assistance to
Population Served <u>Due Date</u>	CWSs on VA and ERP preparation through

II - 4 - 18 01/15/2004

Outcomes/Desired Results		Regional Strategies
100,000 or more 50,000 - 99,999 3,301 - 49,999  Measure(s): Number of Vulnerability A Vulnerability Assessment of submitted on time.		grants to state drinking water primacy agencies to support state security coordination and training and technical assistance activities.  > Provide input and assistance to the Water Protection Task Force in helping HQ grantees/contractors implement train-the-trainer and direct training and technical assistance programs for assisting small and medium sized CWSs in preparing their VAs and ERPs.  Evaluation:  > Track and monitor the number of direct requests for technical assistance from CWSs quarterly.  > Track and monitor the number of VA/ERP training and technical assistance opportunities provided by the states and number of CWSs attending. Semi-annually  > Track and monitor the number of technical assistance/training workshops and train-the-trainer offered in the Region and # of CWSs attending. Semi-annually.
Subobjective 4.4.2: Cond	luct Relevant Research	
Homeland Security  1. Educate and Support Programs/Agencies on indoor air concerns related to prevention and recovery events.  A. Resource for the region and its partners on federal documents related to indoor air concerns.		A. Provide information on federal documents through existing outreach mechanisms to building owners/managers and schools. Besides the Indoor Air's existing outreach work with I-BEAM and IAQ Tools for Schools, other programs (i.e., Energy Star, Pollution Prevention) working with building groups should be provided information on existing federal documents.
B. Be aware of appropria have worked with Public I past, which could be acces investigations after a suspe	Health Officials in the sed for building	B. Survey State Health or Environmental Agency IAQ Contacts on their knowledge of appropriate IAQ consultants within their state.
C. Connect with Regional Coordinators to keep them Air Program's abilities, equ	informed of Indoor	C. Meet with Region 5 Homeland Security/Emergency Response staff to provide overview of indoor air program's prevention and

II - 4 - 19 01/15/2004

Outcomes/Desired Results	Regional Strategies
with Division's RICT representative to include indoor air roles/resources into Region's incident response plan.	recovery information. Meet with the Air Division's representative on the Region's RICT to bring the indoor air roles/resources into the Region's incident response planning.
D. Be a general resource on indoor air issues of concern for protecting occupants, including those sheltered in-place. These topics would include ventilation and filtration.	D. Indoor Air Program will continue its outreach efforts to building owners/building managers, including school managers, on prevention and recovery information related to protecting building occupants.

II - 4 - 20 01/15/2004

# Goal 5 - Compliance and Environmental Stewardship

**Objective 5.1: Improve Compliance:** By 2008, maximize compliance to protect human health and the environment through compliance assistance, compliance incentives, and enforcement by achieving a 5% increase in pounds reduced, treated, or eliminated; and achieving a 5% increase in the number of regulated entities making improvements in environmental management practices.

A. What is the current state of human health or environmental protection for this objective in the region and are there any relevant trends over time (i.e., what indicators or data specific to this objective characterize the current status and trends as context for the region's strategy)?

Goal 1 (Air) - For the new 8-hour ozone and PM 2.5 NAAQS, there are many areas in the Region that are monitoring nonattainment. A full 50% of the nations Iron and steel capacity is within the Region and 26% of the nations coal fired utility electrical production (19% of total utility electrical generation) comes from Region 5. Region 5 has more than 10,000 sources affected by MACT standards. More than 6300 sources report TRI emissions in Region 5 with greater than 208,000 tons per year of air emissions in 2000. There are many business sectors that do not follow procedures to minimize or prevent chlorofluorocarbon release, which contributes to the worldwide problem of ozone depletion.

Goal 2 (Water) - Drinking water - Roughly 25% of the water body impairments in the Region are based on fish consumption advisories. The most common contaminants causing the advisories are PCBs and mercury. Region 5 has over 40% of the nation's CSOs and rapidly growing urban areas that need to better control storm water runoff. In addition, there are substantial numbers of municipalities with sanitary sewer overflow and bypassing problems that have resulted from aging, overloaded and/or poorly maintained wastewater treatment facilities. Control of CSOs and elimination of SSOs & bypassing though compliance activities will eliminate the discharge of billions of gallons of raw and partially treated sewage to the nation's waters.

**Goal 3 (Land) -** Underground Storage Tanks - LUST - RCRA corrective action and TSCA cleanup sites.

Goal 4 (Communities & Ecosystems) - Pesticides and their affect on workers and others - Blood-lead levels in children - PCBs and PBTs - Many low-income and minority communities (both in urban and rural areas) continue to bear the burden of exposure to environmental pollution resulting in negative impacts to their health and overall quality of life. Trends indicate that wetland acreage is declining. A change in the definition of waters of the U.S. could also lead to a loss of the wetlands, which area significant natural resource in Region 5.

B. What are the major problems in the region that need to be addressed in order to make progress toward the strategic objective?

Compliance with applicable laws and regulations must be ensured in order to achieve the results desired under Goals 1 through 4 - clean air, clean water, preserved and restored land, and healthy people, communities, and ecosystems. The Region will do this by using the compliance tools identified at the national level - compliance assistance, incentive policies, and monitoring & enforcement. The Region will also focus on areas that have been a problem in the past by 1) aggressively addressing Environmental

II - 5 - 1 01/12/2004

Justice and ensuring better integration of EJ into every facet of its operations, 2) making enforcement and compliance assurance work more strategic, efficient, and effective ("smart enforcement") by focusing on actions leading to the most significant and measurable impacts (SNC, NSR/PSD, and CSOs/SSOs), and 3) strategically using enforcement and compliance data by making it accurate, timely, and able to be used for targeting enforcement, compliance incentives, and compliance assistance actions.

Outcomes/Desired Results	Regional Strategies/Tools
Subobjective 5.1.1: Compliance Assistance	
Achieve a 5 percentage point increase in the percentage of regulated entities that improved their understanding of environmental requirements; a 5 percentage point increase in the number of regulated entities that improved environmental management practices; and a 5 percentage point increase in the percentage of regulated entities that reduced, treated, or eliminated pollution.	Improve the quality and increase the amount of compliance assistance provided to the regulated community through use of various compliance assistance tools. These might include training, workshops, on-site visits, mailings, etc.  Measures:  CAA:  # of MACT categories determined to benefit from compliance assistance (ARD is developing a plan to oversee air toxics permitting and implementation that will determine the MACT categories).  # entities receiving compliance assistance in each category.  SDWA:  # of information packages sent to motor vehicle waste disposal wells containing an explanation of regulatory requirements & the environmental benefits of properly managing the wells, guidance on how to properly close the wells, and a request for voluntary compliance in advance of the regulatory compliance deadline (UIC program)
	<ul> <li>* % of State environmental agencies (and other State agencies/departments that provide compliance assistance for RCRA requirements) participating in an annual meeting to share developments in, and coordinate the delivery of, accurate compliance assistance for RCRA requirements.</li> <li>* % of R5 States agreeing, in cooperative agreements, to (a) measure and (b) report to EPA results from providing compliance assistance for RCRA requirements.</li> <li>* % entities receiving State-provided compliance assistance that report increased understanding of RCRA requirements.</li> <li>* % entities receiving State-provided compliance assistance</li> </ul>

II - 5 - 2 01/12/2004

Outcomes/Desired Results	Regional Strategies/Tools	
	that report improved hazardous waste management practices.  Mentities receiving State-provided compliance assistance that report reduced, treated, or eliminated pollution.	
	EPCRA:  # Form R workshops conducted.  # entities that increased their understanding of environmental requirements.  # entities contacted for data quality checks that indicated companies would revise their Form Rs for accuracy.	
	Evaluation: Region 5 OECA is now working on a plan that will describe how to evaluate whether the quality and increase of compliance assistance is leading to the measures under Subobjective 5.1.1. This plan will be finished and operational by the beginning of fiscal year 2005.	
Subobjective 5.1.2: Compliance Incentives		
Achieve a 5 percentage point increase in the percentage of facilities that use EPA incentive policies to conduct environmental audits or other	Improve the quality and increase the amount of audits or other actions by offering the full suite of Agency incentive policies. These include the Audit Policy, Small Business Compliance Policy, and other incentives.	
actions that reduce, treat, or eliminate pollution or improve environmental management practices.	Measures:  CAA:   # of sectors or geographic areas determined to benefit from voluntary audit approach.  # of facilities to use incentive policies.  # of pollution reductions resulting from the use of incentive policies.	
	<ul> <li># of entities submitting self-disclosures as a result of use of EPA's policy: Incentives for Self-Policing: Discovery, Disclosure, Correction and Prevention of Violations.</li> <li># of entities submitting self-disclosures who also submit reports of (1) pollution (a) reduced and/or (b) eliminated, and/or (2) improved hazardous waste management practices as a result of use of EPA's policy: Incentives for Self-Policing: Discovery, Disclosure, Correction and Prevention of Violations.</li> <li>% of inspected former self-disclosers having successfully</li> </ul>	

II - 5 - 3 01/12/2004

Outcomes/Desired Results	Regional Strategies/Tools
	which they had received penalty mitigation in FY01 and 02.  * % of inspected former self-disclosers having successfully prevented violations of any RCRA requirements since the self-disclosure for which they had received penalty mitigation in FY01 and FY02.
	Evaluation: Region 5 OECA is now working on a plan that will describe how to evaluate whether the quality and increase of compliance assistance is leading to the measures under Subobjective 5.1.2. This plan will be finished and operational by the beginning of fiscal year 2005.
Subobjective 5.1.3: Monitoring and Enforcement	
Achieve a 5% increase in the number of complying actions taken during inspections; a 5 percentage point increase in the percentage of enforcement actions requiring that pollutants be reduced, treated, or eliminated; and a 5 percentage point increase in the percentage of enforcement actions requiring improvement of environmental management practices.	Increase the environmental protection gained from compliance actions by using actions to require pollution reduction, better management practices, and environmental investment of dollars.  Measures:  EPCRA:  # of facilities submitting Form Rs in Region 5 as a result of late reporter investigations.  # of facilities submitting Form Rs on time as a result of late reporter investigations.  # of facilities submitting Form Rs on time as a result of late reporter investigations.
	<ul> <li># enforcement actions issued as a result of lead investigations in EJ areas in large cities.</li> <li># settled with pollution reduction as a result of lead investigations in EJ areas in large cities.</li> <li># dollars invested in improved environmental performance as a result of lead investigations in EJ areas in large cities.</li> <li># housing units made lead safe.</li> </ul>
	<ul> <li>SDWA:</li> <li># high-priority cases identified as result of screening of UIC Database for most serious violations.</li> <li># enforcement actions issued as result of screening of UIC Database for most serious violations.</li> <li>CWA:</li> </ul>

II - 5 - 4 01/12/2004

Outcomes/Desired Results	Regional Strategies/Tools
	<ul> <li># enforcement actions issued for violations of Section 404.</li> <li># warning letters sent for violations of Section 404.</li> <li>100 acres of wetland restored, protected, and mitigated.</li> <li># wetland sites that meet quality and quantity criteria.</li> <li>1 methodology using Long Term Control Plan milestone data to assess water quality improvements made.</li> <li>CAA (targetting for commitments includes consideration of input from all relevant sources):</li> <li>27 compliance evaluations and 10 enforcement actions at industrial facilities, and 13 compliance evaluations and 4 enforcement actions at commercial facilities</li> <li>Documented emission reductions in each category above.</li> <li>Complying actions taken during inspections documented in the ICDS.</li> <li>Emission reductions in cases documented in the CCDS.</li> </ul>
	RCRA:  # of entities inspected with no violations of RCRA detected.  # of entities inspected which, though noncompliant at the outset of an inspection, achieved compliance with the RCRA requirement being violated in the presence of the inspector during the inspection.  # of concluded enforcement actions requiring pollution reduction and protection of populations or ecosystems  # of concluded enforcement actions requiring improved environmental management practices  # Amount of pollution reduced by enforcement actions  # of dollars (U.S.) Spent and/or to be spent by violators of RCRA requirements, as a result of formal enforcement actions, to (a) achieve compliance, (b) perform supplemental environmental projects (if applicable), and (c) pay civil penalties.
	Evaluation: Region 5 OECA is now working on a plan that will describe how to evaluate whether the quality and increase of compliance assistance is leading to the measures under Subobjective 5.1.3. This plan will be finished and operational by the beginning of fiscal year 2005.

II - 5 - 5 01/12/2004

**Objective 5.2: Improve Environmental Performance through Pollution Prevention, Innovation, and Analysis.** By 2008, improve the environmental performance of governments, businesses, and the public by preventing pollution, increasing efficiency in operations, activities, and products, and creating incentives and reducing regulatory barriers for the adoption of cost-effective, multi-media, results-based approaches.

A. What is the current state of human health or environmental protection for this objective in the Region and any relevant trends over time (i.e., what are indicators or data specific to this objective that characterize current status and trends as context for the regional strategy)?

**Pollution Prevention** - There is an ever-increasing number of partnership programs coordinated out of the Agency. Many of these voluntary initiatives are keyed at least partially to P2, so there's the potential for an ever-increasing amount of pollution prevented as a result of participation in these programs. An example of a downward trend is in an area of P2 integration, specifically with regards to the number of P2 SEPs as a part of enforcement actions.

**Innovation** - More and more businesses and industries are developing environmental management systems and other innovative environmental solutions, and Region 5 is working hard to increase the number. However, Region 5 lacks a cohesive approach to innovation among its programs. Businesses and industries are currently reached as individual entities instead of by sector; there needs to be a switch to working with sectors for more effective innovation use.

**NEPA** - Environmental issues associated with Federal projects and actions subject to NEPA are very project-specific and are not easily generalized.

B. What are the major problems that need to be addressed in order to make progress toward this strategic objective in the Region?

**Pollution Prevention** - There is a desperate need to integrate P2 into the normal everyday work that is done by the Region. Until this happens, P2 will not happen to the degree that is envisioned by the Agency's national strategic plan. Program managers need to "own" this work as they do other work and successfully measure the increase in P2.

**Innovation** - FTE and other resources are needed by Region 5 to carry out the Headquarters' driven innovation initiatives. Also, EPA's policy, its desire to be consistent, and rules and regulations have blocked innovation approaches suggested by businesses and states - making it difficult to have necessary flexibility in this area.

**NEPA** - Emerging environmental issues (e.g., air toxics, invasive species, climate change, secondary land use development, ecosystem health) will increasingly need to be addressed in Federal NEPA documents in order for direct, indirect, and cumulative environmental impacts to be more fully understood by Federal decision makers. NEPA process streamlining, especially for major transportation projects, is a priority of the Administration and Congress.

II - 5 - 6 01/12/2004

Outcomes/Desired Results	Regional Strategies/Tools
Subobjective 5.2.1: Pollution Prevention by Government and the Public	
<ul> <li>A. Reduction of pollution/waste in Region 5 through better Government operations.</li> <li>Measures:</li> <li>Full implementation of Greening of the Government executive orders.</li> </ul>	Promote reduction of pollution/waste in Government and business in the Region by following "Greening of the Government" Executive Orders  Evaluation: Region 5 is now working with OPPTon a plan that will describe how to evaluate whether P2 integration into media programs' regulatory and nonregulatory activities is leading to the measures under Subobjective 5.2.1. This plan will be finished by the end of annual year 2004.
<ul> <li>B. Increase in public's awareness of, and role in, preventing pollution in Region 5.</li> <li># people reached by information regarding preventing pollution.</li> <li># of people participating in activities to reduce pollution.</li> </ul>	Promote prevention of pollution/waste source reduction in the public in the Region by distributing education/outreach materials; and participating in national and regional efforts to promote P2 (e.g., voluntary initiatives and partnership programs such as Energy Star).  Evaluation: Region 5 is now working with OPPTon a plan that will describe how to evaluate whether P2 integration into media programs' regulatory and nonregulatory activities is leading to the measures under Subobjective 5.2.1. This plan will be finished by the end of annual year 2004.

II - 5 - 7 01/12/2004

#### **Outcomes/Desired Results**

C. Reduction in use of hazardous chemicals in Clark lab and implementation of sustainable use practices in both the Clark lab and Jackson building.

#### **Measures:**

- 1. Both the R5 Jackson and the Clark lab have certified EMSs which are being implemented in accordance with EO13148 and EPA national policy statement.
- 2. Achievement of environmental goals in EMS that are currently being developed.
- 3. Number of events/activities conducted or participated in by Regional staff that promote and the understanding and value of effective EMS.

#### Regional Strategies/Tools

Region 5's EMS Coordinator is working with two teams to develop EMS for the Clark lab and the Jackson building. The team is developing the environmental aspects and environmental management plans and operational control plans which have set goals for reducing use of hazardous chemicals and putting into place operational controls which ensure sustainable practices in both building which are complementary with rules and regulations. In house training will focus on increasing awareness of EMS and individual responsibilities. Region 5 will promote environmental stewardship by having a certified EMS at both the Jackson and Clark buildings and promote the understanding and value of effective EMS internally and externally.

#### **Evaluation:**

### Subobjective 5.2.2: *Pollution Prevention by Industry*

Reduce pollution in business operations through the adoption of more efficient, sustainable and protective policies, practices, materials and technologies.

#### **Measures:**

- Lbs. pollution reduced, gallons water saved, or energy conserved.
- % of TRI waste reduced

- 1. Promote prevention of pollution/waste source reduction in industry in the Region by providing networking and training activities, technical assistance, and grants to state/local governments, tribes and NGOs; developing and/or distributing education/outreach materials; and participating in national and regional efforts to promote P2 (e.g., voluntary initiatives and partnership programs such as Energy Star).
- 2. Improve P2 data collection and management.
- 3. Integrate P2 into state and federal compliance assistance, enforcement actions, permits, technical assistance and other regulatory procedures.

#### **Evaluation:**

Region 5 is now working with OPPT on a plan that will describe how to evaluate whether P2 integration into media programs' regulatory and nonregulatory activities is leading to the measures under Subobjective 5.2.2. This plan will be finished by the end of annual year 2004.

II - 5 - 8 01/12/2004

Outcomes/Desired Results	Regional Strategies/Tools
Subobjective 5.2.3: Business and Community Innovation	
A. Improved compliance and increased stewardship practices in five Region 5 priority sectors.	Region 5 is developing a Regional Sector Framework that complements national sector strategy and targets the Region's priority sectors. The framework will identify priority sectors, team
Measures: 1. Five R5 significant sectors are participating in the national sector strategy and are working with the Region and HQ on the development of integrated strategies and EMS template for each sector.	members and responsibilities, participating partners, and accountability. Identified team members will work with headquarters on outreach and development of EMS templates.  Evaluation:
2. 2 of 3 sectors achieving goals established for improvement in environmental performance and development of EMS template.	
B. Small businesses in Region 5 routinely consult with Region 5 regarding assistance programs, compliance issues, pollution prevention, and environmental management.  Measures:  Number of small businesses improving environmental management.  Number of small businesses adopting environmental stewardship practices.	Region 5 Compliance Assistance Coordinator and Regulatory Innovation Coordinator work with programs to identify opportunities to provide technical assistance to small businesses. Region 5 will use a variety of innovative tools and approaches, voluntary programs, and pollution prevention practices to improve the way small businesses manage their environmental impacts. The small business effort will keep up to date on regional regulatory issues.
	Evaluation:
C. Reductions of 3% in water use, 3% in energy use, 3% in total solid waste, 1% in air releases, and 5% in water discharges by Performance Track members who commit to improvements in those categories.	Encourage reductions in pollution by Performance Track members by recruiting high- performing facilities to apply for membership in the program, ensure that successful applicants have developed meaningful environmental commitments, conduct site visits at approximately
Measures:  → 3% reduction in water use  → 3% reduction in energy use  → 3% reduction in solid waste	20% on facilities annually, provide program incentives as appropriate, and carefully review and evaluate annual performance reports.
<ul> <li>1% reduction in solid waste</li> <li>1% reduction in air releases</li> <li>5% reduction in water discharges</li> </ul>	Evaluation: Will be based on performance data provided by member facilities in annual performance reports.

II - 5 - 9 01/12/2004

Outcomes/Desired Results	Regional Strategies/Tools	
Subobjective 5.2.4: Environmental Policy Innovation		
A. New practices and approaches that improved environmental results or result in program efficiency and effectiveness are adopted by Region 5 programs, and if relevant, by Headquarters.  Measures:  # of approaches tested and evaluated.  # of new practices and/or approaches tested, that are adopted by programs for implementation.	Region 5 Regulatory Innovation Coordinator and program team members work with states and other partners to develop projects that test new approaches to address problematic program areas and or better ways to gain environmental results. The team members work with national program offices to ensure practices are complementary and or equivalent to national policy and regulations. The projects will identify baseline measurements as well as indicators. Data will be routinely collected and analyzed for results. Final results will be assessed and recommendations will be presented to Region 5 Senior Policy Group for direction. If approved, Region 5 will promote use of effective practices and tools by developing a process for applying the successes and instituting a clearinghouse for new ideas and experiments.  Evaluation:	
B. Flexible approaches, cross media collaboration, and innovative thinking are routinely used to strategically address the Region's priorities issues and problems as a result of the Senior Policy Group's Region 5 Innovation Agenda.  Measures:  # of Regional priorities advanced by Senior Policy Group and the Innovation	The Senior Policy Group Region 5's Innovation Agenda provides an overall focus and direction for the Region's (cross program) innovation efforts. By addressing innovation as a group, the Region's Innovation Agenda will foster collaboration and innovative thinking to address issues and solve problems across programs, and identify emerging areas ripe for new approaches. The Region's Innovation Agenda will be a model for how the Region's staff should work together	

- Action Council member, integrated into the national innovation agenda.
- # of R5 innovation initiatives/efforts that are national models.

to look at the bigger picture. The Region's Innovation Agenda will be supported by an Innovation Network comprised of mid-level managers and experienced veterans of innovation projects, and State representatives.

#### **Evaluation:**

II - 5 - 10 01/12/2004

Outcomes/Desired Results	Regional Strategies/Tools
Subobjective 5.2.7: Implement NEPA  A. Provide comments on other agencies' NEPA documents to enhance the environmental quality of federal decisions.  Measures:      # of EISs that are commented on and rated.      % of EPA comments on Draft EISs resolved in the Final EIS or Record of Decision      # of terrestrial and wetland acres protected and/or mitigated as a result of EPA comments.      # of related NEPA materials commented on.	Within the comment periods specified by the sponsoring agencies, ensure EPA compliance with Clean Air Act Section 309 review process by reviewing other Federal agencies' NEPA documents and providing comments that enhance the environmental quality of federal decisions. Provide early involvement and input on selected projects and planning efforts.  Evaluation:
B. Congressional special appropriation projects for drinking water and wastewater infrastructure are implemented without significant adverse impacts to the environment.  Measures:  # of categorical exclusions, environmental assessments/findings of no significant impact, or environmental impact statements/records of decision.	Ensure EPA compliance with NEPA by conducting a NEPA analysis of all relevant special appropriation construction projects for wastewater and drinking water infrastructure.  Evaluation:

**Objective 5.3: Build Tribal Capacity.** Through 2008, assist all federally recognized tribes in assessing the condition of their environment, help in building tribes' capacity to implement environmental programs where needed to improve tribal health and environments, and implement programs in Indian country where needed to address environmental issues.

A. What is the current state of human health or environmental protection for this objective in the Region and any relevant trends over time (i.e., what are indicators or data specific to this objective that characterize current status and trends as context for the regional strategy)?

There as been limited advancement in the development of environmental programs to address the various environmental/human health issues that are present in Indian country. In the mean time we are also only partially success in the direct implementation of the programs that have not been delegated to the Tribes.

II - 5 - 11 01/12/2004

- B. What are the major problems that need to be addressed in order to make progress toward this strategic objective in the Region?
- The lack of funds has not allowed the Region to adequately pursue direct implementation of environmental programs on Tribal land. The funding issue also affects the Region's ability to work with Tribes to promote the identification and development of environmental programs to be delegated.

Outcomes/Desired Results	Regional Strategies/Tools
A. Elimination of 20% of the data gaps for environmental conditions for major EPA water, land and air programs as determined through the availability of information in the EPA Tribal Baseline Assessment Project.  Measures:  Elimination of 20% of data gaps	Develop strategy that will address data gaps identified in the EPA Tribal Baseline Assessment Project  Evaluation: Region 5 IEO is now working on a plan that will describe how to evaluate whether the strategy above is leading to outcomes stated in the first column This plan will be finished by the end of annual year 2003.
B. 100% of the federally recognized tribes have access to general multi-media capacity building funding as determined by the number of tribes receiving Indian General Assistance Program (GAP) funding.  Measures:  100% tribes have access.	Develop Tribal Capacity to Protect the Environment by promoting participation of Region 5 Tribes in the GAP.  Evaluation: Region 5 IEO is now working on a plan that will describe how to evaluate whether the strategy above is leading to outcomes stated in the first column This plan will be finished by the end of annual year 2003.
C. 50% increase in the number of tribes with environmental monitoring and assessment activities occurring under EPA approved quality assurance procedures as determined by the number of Quality Assurance Practice Plans in use.  Measures:  50% increase in tribes with monitoring and assessment activities.	Develop Tribal Capacity to Protect the Environment by providing funding and technical Assistance via GAP/TEA for Tribes to address Environmental Monitoring Assessments  Evaluation: Region 5 IEO is now working on a plan that will describe how to evaluate whether the strategy above is leading to outcomes stated in the first column This plan will be finished by the end of annual year 2003.

II - 5 - 12 01/12/2004

Outcomes/Desired Results	Regional Strategies/Tools
D. Increased implementation of environmental programs in Indian country to X (cumulative total) as determined by program delegations, approvals, or primacies issued to tribes and direct implementation activities by EPA and determined by direct programs activity or the number of Direct Implementation Tribal Cooperative Agreements (DITCAs) awarded.  Measures:  1. # delegation, approvals, or primacies issued.	Promote the implementation of EPA Statutory Programs in Indian Country by investigating pathways to carry Tribal programs form development to Federal status. Including addressing DI responsibilities and DITCAs  Evaluation: Region 5 IEO is now working on a plan that will describe how to evaluate whether the strategy above is leading to outcomes stated in the first column This plan will be finished by the end of annual year 2003.
<ul> <li>E. A TEA process that includes tribal priorities from all reservations, and to improve integration of tribal priority information into program planning.</li> <li>Measures:</li> <li>1 TEA process</li> </ul>	Address Tribal Environmental Priorities by promoting all EPA Region 5 Tribes to participate in TEA process. Work with Planning Network to promote Tribal environmental needs during Agency planning budget activities.  Evaluation: Region 5 IEO is now working on a plan that will describe how to evaluate whether the strategy above is leading to outcomes stated in the first column This plan will be finished by the end of annual year 2003.
F. Development of 15 (cumulative) EPA and interagency cross program software applications to increase the use of EPA Tribal Baseline Assessment Project information in setting environmental priorities and informing on policy decisions.  Measures:  15 EPA software applications	To incorporate the use of Tribal Baseline Assessment information into cross program software by sharing data.  Evaluation: Region 5 IEO is now working on a plan that will describe how to evaluate whether the strategy above is leading to outcomes stated in the first column This plan will be finished by the end of annual year 2003.
G. 50% increase in the number of tribes with multi-media programs reflecting traditional use of natural resources as determined by use of PPGs integrated TEAs or other agreements.  Measures:  > 50% increase in tribes	Work with Tribes to identify the natural resources to be used traditionally thru the use of the TEAs, PPGs and other agreements.  Evaluation: Region 5 IEO is now working on a plan that will describe how to evaluate whether the strategy above is leading to outcomes stated in the first column This plan will be finished by the end of annual year 2003.

II - 5 - 13 01/12/2004

## III. Regional Approaches to Implementing the Agency's Cross-Goal Strategies

In its Strategic Plan, EPA identified a number of areas where cross-Agency, cross-media work is necessary to meet the Agency's goals and objectives, and articulated the strategies or means employed to carry out that work. This chapter of the Region 5 Plan briefly explains how we intend to implement the national strategies for Information, Innovation, Human Capital, and Science in Region 5.

#### **Information**

Accurate, timely, and comprehensive information is critical for Region 5 to fulfill its mission. Accordingly, the Region is preparing a strategy to provide clear direction for the Region to use information to protect the environment in all EPA Goals. The Region's success depends on the availability of high-quality, timely, and reliable information to:

- Implement environmental quality standards;
- Implement environmental regulations;
- Issue permits and monitor compliance;
- Track environmental conditions and trends; and
- Assess program performance.

In order to maintain and enhance the value of its information assets, the Region will continue to support the improvement of data quality, implementation of data standards, enhancement of compatible data systems, and identification and filling major data gaps. At the same time, the Region will stay abreast of new technologies and invest in technologies that can best support the Agency's business processes and changing information needs. The Region's Information Management Branch (IMB) and Office of Information Services (OIS) are effectively using the cross-program Information Resources Management Steering Committee (IRMSC) to provide review and advice on IRM policies, priorities, strategies, and programs, and for assisting in communicating and implementing these policies and priorities within Region 5.

#### **Innovation**

Region 5 maintains an Innovation Action Team that works with regional and national programs and with states to develop and test innovative approaches for regulating pollution and streamlining program implementation. This team develops effective partnerships with states, businesses and non-governmental organizations for greater environmental results. Its activities include:

- \* managing regulatory innovation projects and initiatives
- \* facilitating the Region's commitments to the National Innovation Strategy
- \* promoting partnership-building with external stakeholders
- \* evaluating innovations

III - 1 01/15/2004

#### **Human Capital**

Region 5 is currently developing its own strategy to implement the Agency's Human Capital Strategy. Information on Region 5's strategy will be included in the final Regional Plan.

#### **Science**

The Region has prepared its own strategy for Science which complements and supports the national cross-goal strategy for science. This Regional Science Strategy identifies actions that will be undertaken to improve our scientific skill mix, enhance science collaboration/communication activities, and ensure that the our scientists and decision makers work to make science a key component to regional priority setting. Region 5's Regional Science Strategy can be found at \_\_\_\_\_\_.

III - 2 01/15/2004

#### IV. Regional Accountability and Performance Measurement Tools

#### **RESERVED**

Region 5 is in the process of revising its accountability and performance measurement processes in the context of the new Agency Strategic Plan and the Region's evolving partnerships with its states and tribes. The revised processes will be described in the final Region 5 Plan submitted in April 2004.

#### V. Partnerships with the Region's States and Tribes

#### **Background and Context**

All of the environmental programs managed by the States in Region 5 are faced with significant, and in some cases crippling, resource shortfalls. Increasingly, the State environmental and natural resource agencies have been appealing to the Region for assistance in managing base-program activities. Similarly, Tribal governments in Region 5 do not in most cases have the resources to implement environmental programs necessary to protect the health of Tribal members and the natural resources of the Tribe. They, consequently, look to the Region to carry out those programs as part of the United States Government's trust responsibility to the Tribes.

This problem of insufficient resources is not likely to be diminished in the short-term and, as a consequence, finding ways to deal with it has become the top priority of Region 5's partnership with the States and Tribes. A major focus of the Region's efforts in addressing this priority is to work with the States and Tribes to find innovative ways to achieve the objectives of the base-programs that will allow us to protect the environment more efficiently. As a first step, Region 5 has begun to implement processes to make better use of joint priority planning with the States and Tribes.

#### These processes emphasize:

• Setting joint priorities with States in Environmental Performance Partnership Agreements (EnPPAs) and with Tribes in Tribal Environmental Agreements (TEAs) more effectively, using them to inform Regional planning, and re-directing work as necessary to accomplish a joint goal.

# Joint Priorities and Joint Planning: A more inclusive understanding In this context joint priorities and joint planning mean focusing on any area which a State or Tribe and the Region agree needs our mutual attention - it could be an environmental issue, a national EPA priority or budget initiative, a specific place, a particular pollutant, or a problematic process that needs fixing in order to free up time and resources. We could focus for the long term or short term, as the needs dictate. An important component is joint measurement, so we both know when we've accomplished what we set out to do.

- Approaching States who maintain the State-EPA relationship through traditional work plans with opportunities for joint planning on a Regional scale.
- Looking at other forms of partnership agreements (in addition to EnPPAs).

V - 1 01/15/2004

#### **Fostering Partnerships with the States**

Currently, four of the Region's six states - Illinois, Indiana, Minnesota, and Wisconsin - are actively involved in the National Environmental Performance Partnership System (NEPPS) and join the Region in Performance Partnership Agreements (PPAs). The region continues to work with the remaining two states - Michigan and Ohio - in developing categorical grant agreements each year. Michigan, however, is currently considering whether to engage in NEPPS.

The Region is implementing an improved process for up front planning and priority setting with the States. Each Performance Partnership Agreement (PPA) negotiation period will start with a period to identify mutual and singular priorities. The Region and each State will work together to identify the top priorities as well as develop a skeletal work plan that identifies how both agencies will pool their resources to achieve the goal.

In the current round of PPA discussions, joint Region 5/State priorities have been identified with the following states:

Illinois: Redesignating the McCook PM Nonattainment Area; Developing and

Implementing a Municipality Strategy; Assessing and Supporting Recreational Uses of Chicago Waterways; Developing and Implementing an Environmental Security Strategy; Minimizing Backyard Burning of Trash; Developing and Implementing a Memorandum of Agreement on Coordinating Regulatory Innovation; and Assessing Areawide Contamination

of Local Water Supplies.

Minnesota: Clean Air Minnesota; Streamlining Major Facility Air Permitting Programs;

Water Quality Monitoring; Streamlining NPDES Programs; and TMDL

Development.

Wisconsin: Remediation of the Fox River flowing to Green Bay on Lake Michigan; the

Brownfields State Response Program; Wisconsin's Environmental Cooperative Pilot Program, dealing with regulatory innovation; and the

National Environmental Information Exchange Network.

Within the context of a broader strategic framework, the PPA between Region 5 and the state of Indiana places a priority upon focusing on water quality issues, enhancing efforts to reduce toxics, and improving communication with local communities.

V - 2 01/15/2004

#### **Fostering Partnerships with the Tribes**

All partnerships with Tribes are guided by the 1984 Indian Policy. The primary focus for overall planning between EPA and the Tribes is the Tribal Environmental Agreements (TEAs). The Tribes each develop a TEA that focuses on specific environmental problems, programmatic development, and capacity building. The TEA also includes estimated costs, resources, objectives, and projected time lines. The Region has instituted the use of TEAs as the primary planning process. Individual TEAs have been negotiated with 33 of the 35 Tribes in Region 5.

In addition to TEAs, Region 5 and the Tribes convene the Regional Tribal Operations Committee (RTOC) which is the mechanism by which Tribal officials and Region 5 senior managers meet to provide input and share information on Federal program direction and implementation and Tribal needs and concerns. The Region is also a member of the Interagency Memorandum of Understanding for Federal Agencies with Tribal responsibilities.

Tribal priorities in Region 5 include measures to protect and restore ground and surface sources of drinking water; improve indoor air quality in home, businesses and schools on the reservations; address water and wastewater and solid waste management infrastructure needs; and expand ambient monitoring and targeted studies of air, water, and land resources in order to better characterize the current state of those resources and enhance their management.

V - 3 01/15/2004